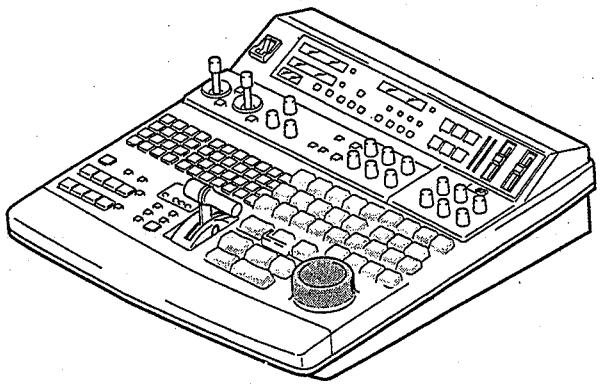
FXE-100P

SERVICE MANUAL

AEP Model
UK Model
E Model



SPECIFICATIONS

General

Signal system	PAL
Power requirements	AEP model: 220–230 V AC, 50/60 Hz UK model: 240 V AC, 50/60 Hz E model: 120–220–240 V AC, 50/60 Hz
Power consumtption	Maximum 52 W
Operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	–20°C to +60°C (–4°F to 140°F)
Mass	Approximately 7.3 kg (16 lb 1 oz)
Dimensions (w/h/d)	424 × 138.5 × 437.5 mm (16 3/4 × 5 1/2 × 17 1/4 inches)

Editing controller functions

CPU	16 bit
Time counter	Internal time counter (× 3)
Time count display range	(hours:minutes:seconds:frames) • Time code: 00:00:00:00 to 23:59:59:24 • CTL: ±9:59:59:24
Edit modes	• Insert (channels: video, audio 1, audio 2) • Assemble • First edit • Time code insert • Split (audio split offset from video IN point) • Dynamic Motion Control (DMC)
Edit reference signals	• CTL signal • SMPTE/EBU time code (LTC) • 8 mm time code
Editing precision	RS-422 interface: ±0 frames (time code) ±1 frame (CTL) RS-232C interface: ±1 frame (time code)
Transition time range	0 to 999 (unit: frames)
Pinch-on delay	Simultaneous measurement of pinch-on delay for up to three VCRs connected to RS-422/RS-232C connectors. Measurement data stored in memory.
EDL memory capacity	99 edits

Control functions

VCR interfaces	
RS-422	RS-422 (D-sub 9-pin) × 3 PLAYER 1, PLAYER 2, RECORDER Connectable VCRs: Hi8: EVO-9850P/9800P S-VHS: SVO-9620, SVP-9020 Betacam: UVW-1800P (recorder) U-matic: VO-9800P/9850P
RS-232C	RS-232C (D-sub 9-pin) × 3 PLAYER 1, PLAYER 2, RECORDER Connectable VCRs: Hi8: EVO-9650P
VCR remote control functions	Playback, still playback, rewind, standby off, stop, jog control, shuttle control, record, eject, stop all VCRs
GPI interface	GPI OUT (BNC) × 2 GPI IN (BNC)
EDL interface	EDL IN/OUT (D-sub 9-pin)

Input connectors

Video input	
S-video	S VIDEO INPUT (mini DIN 4-pin) × 4, unbalanced PLAYER 1, PLAYER 2, AUX 1, RECORDER • Y: 1.0 V p-p, 75 Ω, sync negative • C: 0.3 V p-p, burst, 75 Ω • Sync: 0.3 Vp-p
Composite video	VIDEO INPUT (BNC) × 4, unbalanced PLAYER 1, PLAYER 2, AUX 1, RECORDER • Video: 1.0 V p-p,75 Ω, sync negative • Sync: 0.3 Vp-p • Burst: 0.3 Vp-p

– Continued on next page –

MICROFILM

VIDEO EDITING SYSTEM

SONY®

Audio input

Stereo	AUDIO L/R INPUT (phono jack), 2 channels × 5 PLAYER 1 MAIN (2), SUB (2) PLAYER 2 MAIN (2), SUB (2) RECORDER (2) AUX 1 (2) AUX 2 (2) Impedance selectable with 600 Ω termination switch. Input level: –7.5 dBs [1] (input impedance 47k Ω or above, 600 Ω switch OFF) +4 dBs [1] (input impedance 600 Ω, 600 Ω switch ON)
Microphone	MIC (monaural phone), unbalanced • Input level: –60 dBs [1] • Input impedance: 4.4 kΩ or above

Output connectors

Video ouput

S-video	S VIDEO OUTPUT (mini DIN 4-pin) × 2, unbalanced PGM 1, PGM 2 • Y: 1.0 V p-p, 75 Ω, sync negative • C: 0.3 V p-p, burst, 75 Ω • Sync: 0.3 Vp-p
Composite video	VIDEO OUTPUT (BNC) × 3, unbalanced PGM 1, PGM 2, MONITOR • Video: 1.0 V p-p,75 Ω, sync negative • Sync: 0.3 Vp-p • Burst: 0.3 Vp-p
Black burst	B.B OUT (BNC) × 4, unbalanced • Sync: 0.3 V p-p, 75 Ω • Burst: 0.3 V p-p, 75 Ω
Audio output (stereo)	AUDIO L/R OUTPUT (phono jack) × 6 PGM 1 (2), PGM 2 (2), MONITOR (2) PGM 1, PGM 2 output level selectable with –7.5dB/+4dB switch

1) 0 dBs = 0.775 Vrms

Video characteristics

Sampling rate	Y: 910 fH [1] R–Y, B–Y: 1/4 × 910 fH
Quantizing	Y, R–Y, B–Y: 8-bit
Frequency	0 to 5 MHz, +1dB/–4dB 53 dB or above

Accessories supplied

AC power cord (1)
Operating Instructions (1)
Handbook (1)

Design and specifications are subject to change without notice.

Accessories not supplied

Remote control cables
- RS-422: RCC-5G/10G/30G (9-pin 5 m/10 m/30 m or approx. 16 f/33 f/98 f)
- RS-232C: SMF-3036C (9-pin/25-pin null modem cable)

XLR 3-pin/phono jack cross cables
- RK-5XLRM (male, 5 m or approx. 16 f)
- RK-5XLRF (female, 5 m or approx. 16 f)

1) 1 fH = 15.625 kHz

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and brides.

2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.

3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

4. Look for parts which, throught functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replace-ment.

5. Check the B+ voltage to see it is at the values specified.

6. Flexible Circuit Board Repairing
   - Keep the temperature of the soldering iron around 270 °C during repairing.
   - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
   - Be careful not to apply force on the conductor when soldering or unsoldering.

WARNING FOR THE CUSTOMERS IN THE UNITED KINGDOM
THIS APPARATUS MUST BE EARTHED.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

TABLE OF CONTENTS

Section	Title	Page
1. GENERAL		
Chapter 1	Outline	
	Features	1-1
	System Configuration Examples	1-3
	A-Roll and Cut Editing System	1-3
	A/B Roll Editing System (1)	1-3
	A/B Roll Editing System (2)	1-4
Chapter 2	Location and Function of Parts	
	Control Panel	1-5
	Editing Control and VCR Manual Control Section	1-5
	Time Counter Displays	1-8
	LEARN Button, SCREEN Section and DIAL MENU Section	1-9
	EDIT PGM (Program) Section	1-10
	Video Switcher and Special Effects Control Section	1-11
	Audio Mixer Section	1-16
	Connector Panel	1-17
Chapter 3	Preparations	
	Precautions	1-20
	Connections	1-20
	Player 1 and Player 2 VCR Connections	1-20
	Recorder VCR Connections	1-21
	Main Monitor and Program Monitor Connections	1-21
	Video Camera, CD Player and Microphone Connections	1-22
	Titler, Computer and Editing Controller Connections	1-22
	Switch Settings and System Setup	1-23
	About the Status Display	1-24
	VCR Preparations	1-26
Chapter 4	Before Starting to Edit	
	Controlling the VCRs	1-27
	Selecting a VCR	1-27
	Controlling Tape Transport Manually	1-27
	Searching for a Scene With the Search Dial	1-28
	Controlling the Speed of Dynamic Tracking (DT) Playback	1-29
	Selecting Video and Audio Signals	1-29
	Default Input and Output Signals	1-30
	Selecting the Same Source for Video and Audio Inputs to a Bus	1-30
	Selecting Different Sources for Video and Audio Inputs to a Bus	1-31
	Monitoring Video and Audio Signals	1-31
	Adjusting Video and Audio Signals	1-33
	Adjusting Video Signals	1-33
	Adjusting Audio Levels	1-34
Chapter 5	Editing Operations	
	Common Editing Procedures	1-36
	Selecting an Edit Mode	1-36
	Insert Mode	1-36
	Assemble Mode and First Edit Mode	1-37
	Selecting an Edit Type	1-39
	Cut Editing	1-39
	A-Roll Editing	1-40
	A/B Roll Editing	1-40
	Manual Effects and Sync Roll Editing	1-41
	Setting Edit Points	1-41
	Setting Edit Points	1-41
	Relation Between IN/OUT Points and Duration	1-43
	Checking, Cuing Up, Changing and Deleting Edit Points	1-44
	Selecting Special Effects	1-47
	Cut	1-47
	Dissolve	1-48
	Wipe	1-49
	Key	1-55
	Input Effects	1-57
	Setting the Transition Time	1-64
	Checking FROM and TO Sources	1-65
	Preview – The Rehearsal Before Edit Execution	1-65
	Executing the Edit	1-66
	Sync Grade During Previews and Edit Execution	1-67
	Automatic Execution of Multiple Edits – Auto Assembly	1-68
	Reviewing the Edit	1-69
Chapter 6	Advanced Editing	
	On the Fly Editing With Two Players – Sync Roll Editing	1-70
	Editing With Manual Special Effects	1-71
	Auto Transition Effects	1-72
	Setting Independent Video and Audio IN Points – Split Editing	1-73
	Editing Variable-Speed Playback – DMC Editing	1-75
	Editing With Fade In and Fade Out	1-77
	Fade In	1-77
	Fade Out	1-78
	Using Color Backgrounds	1-79
	Slide In and Slide Out Using a Color Background	1-79
	Recording Time Code – Time Code Insert	1-80

Section Title Page

Chapter 7 Managing Edit Data
About the EDL ····· 1-81
About Snapshots ····· 1-82
Using the EDL ····· 1-82
Registering an Edit in the EDL ····· 1-83
Recalling Edits From the EDL ····· 1-83
Revising and Deleting Edits ····· 1-84
Using Registered Edits in Automatic Editing ····· 1-85
Transferring Edits To and From External Equipment ····· 1-85
Chapter 8 Setup Menu
Setup Menu Item Table ····· 1-87
Using the Setup Menu ····· 1-87
Setup Menu Items ····· 1-88
System Configuration ····· 1-88
Switcher ····· 1-91
External Interface and EDL ····· 1-93
VCR Device Constants ····· 1-96
Appendixes
Error Messages ····· 1-98
In Case of Trouble ····· 1-99
Audio Signal Flow ····· 1-100
GPI Interface Effect Timing ····· 1-102
Wipe Patterns ····· 1-102

2. DISASSEMBLY

1. Removal of Top Cover Assy ····· 2-1
2. Removal of Rear Panel ····· 2-2
3. Removal of RE-25, RS-62, ED-41, MJ-65 Board and DC Motor ····· 2-2
4. Removal of DV-19, VI-128, MM-27 Board ····· 2-3
5. Removal of Power Block, FU-123 Board ····· 2-3
6. Removal of Fader Assy ····· 2-4
7. Removal of AM-32, KY-22 Board ····· 2-4
8. Removal of Search Dial Block Assy ····· 2-5
9. Removal of KS-15, CP-64, JS-25 Board ····· 2-5
10. Removal of DP-46, AS-46 Board and Meter Unit, LED Level ····· 2-6
11. Removal of Parts in Power Supply Block ····· 2-6

3. DIAGRAMS

1. Circuit Boards Location ····· 3-1
2. Overall Block Diagram ····· 3-2
3. Editor Block Diagram ····· 3-6
4. Audio Block Diagram ····· 3-11
5. Switcher (1) Block Diagram ····· 3-15
6. Switcher (2) Block Diagram ····· 3-19
7. Power Block Diagram ····· 3-22
8. Detailed Block Diagram ····· 3-35

Section Title Page

4. PRINTED WIRING BOARDS AND DIAGRAMS

1. Frame Schematic Diagram ····· 4-1
2. Printed Wiring Boards and Diagrams
- RE-25 (Video/Audio Input/Output) Board ····· 4-4
- DP-46 (Display) Board ····· 4-10
- CP-64 (Master CPU) Board ····· 4-17
- MM-27 (Frame Memory) Board ····· 4-26
- JS-25 (Joy Stick) Board ····· 4-39
- KY-22 (Key Edit) Board ····· 4-43
- RS-62 (RS-422/232C), ED-41 (EDL Input/Output) Boards ····· 4-50
- VI-126 (Video Input) Board ····· 4-57
- AM-32 (Audio), MJ-65 (MIC Jack), AS-46 (Volume) Boards ····· 4-65
- KS-15 (Key SEG) Board ····· 4-73
- DV-19 (Video) Board ····· 4-82
- FU-123 (Fuse) Board/Power Block ····· 4-112

3. Semiconductor Lead Layouts ····· 4-119

5. IC DESCRIPTION

- Main Microcomputer (DV-19 Board IC730 : M37702M4) ····· 5-1
- I/O Expander (DV-19 board IC711 : CXD1095Q) ····· 5-2
- DA Converter (DV-19 board IC704 : M62352) ·· 5-3
- DA Converter (DV-19 board IC705 : M62352) ·· 5-3
- DA Converter (DV-19 board IC706 : M62352) ·· 5-3
- DA Converter (DV-19 board IC707 : M62352) ·· 5-3
- Master Microcomputer (CP-64 board IC500 : M37732S4AFP) ····· 5-4
- CPG, PTC, PIU, ICU (CP-64 board IC518 : CXD1500Q) ····· 5-5
- OSD Microprocessor (CP-64 board IC501 : CXP80P116Q-1) ····· 5-6

6. EXPLODED VIEWS

1. Main Section ····· 6-1
2. Keyboard Section ····· 6-2
3. Search Dial Section ····· 6-3
4. Fader Section ····· 6-4
5. Button Section ····· 6-5

7. ELECTRICAL PARTS LIST

AM-32 Board ····· 7-1
AS-46 Board ····· 7-4
CP-64 Board ····· 7-4
DP-46 Board ····· 7-7
DV-19 Board ····· 7-10
ED-41 Board ····· 7-30
FU-123 Board ····· 7-30
JS-25 Board ····· 7-31
KS-15 Board ····· 7-31

Section Title Page

KY-22 Board 7-35
MJ-65 Board 7-37
MM-27 Board 7-37
RE-25 Board 7-41
RS-62 Board 7-45
VI-126 Board 7-47
Power Block 7-51
HARDWARE LIST 7-54

8. ELECTRICAL ADJUSTMENTS

8-1. OUTLINE 8-1
8-2. PREPARING THE MEASURING EQUIPMENT ... 8-1
8-2-1. Measuring Equipment and Tools Neededes 8-1
8-2-2. Note on Measuring Equipment and Tools 8-2
8-3. CONNECTING THE MEASURING EQUIPMENT 8-2
8-4. SWITCHING THE INPUT SIGNAL 8-3
8-5. MANUAL ADJUSTMENT 8-3
8-5-1. DV-19 4fsc Adjustment 8-3
8-5-2. MM27A Write APC Adjustment 8-4
8-5-3. MM27B Write APC Adjustment 8-4
8-5-4. MM27A Write AFC Adjustment 8-4
8-5-5. MM27B Write AFC Adjustment 8-4
8-6. STARTING UP THE EVR CONTROL PROGRAM 8-4
8-7. EVR ADJUSTMENT 8-6
8-7-1. Fader A DC Level Adjustment 8-6
8-7-2. Fader B DC Level Adjustment 8-6
8-7-3. Sync Level Adjustment 8-6
8-7-4. Set Up Level Adjustment 8-7
8-7-5. Read A Y Level Adjustment 8-7
8-7-6. Read B Y Level Adjustment 8-8
8-7-7. Write A Y Level Adjustment 8-8
8-7-8. Write Y Level Balance Adjustment 8-9
8-7-9. Y/C SEP A Y Level Adjustment 8-9
8-7-10. Y/C SEP B Y Level Balance Adjustment 8-10
8-7-11. A HCENT Adjustment 8-10
8-7-12. B HCENT Balance Adjustment 8-11
8-7-13. Burst Level Adjustment 8-11
8-7-14. A White Balance Adjustment 8-12
8-7-15. B White Balance Adjustment 8-12
8-7-16. A Read Chroma Adjustment 8-13
8-7-17. B Read Chroma Adjustment 8-13
8-7-18. Soft Border Level Adjustment 8-14
8-7-19. Border Color Y/C Level Adjustment 8-14
8-8. ADJUSTMENT PARTS ARRANGEMENT DIAGRAM 8-16

Features

The FXE-100/100P video editing system combines the functions of a video switcher, an audio mixer and a precision editing controller capable of executing A/B roll edits. Unlike conventional editing controllers, it does not require complicated connections to external equipment to achieve special effects such as mosaic and chroma-key insertion. All functions are available from an easy-to-use control panel. Connecting a single monitor allows you to view signals from each source at every stage of the editing process, from preview to program recording.

Following is a description of the principal features of this unit.

Supports multiple signal formats

Compatible with various VCRs

Three RS-422 and RS-232C interfaces permit simultaneous control of up to three VCRs. There are I/O connectors for composite video and S-video, making it possible to connect VCRs using a variety of signal formats, such as Hi8 and S-VHS.

Two time code formats

In addition to CTL signals, SMPTE/EBU standard longitudinal time code (LTC) and 8 mm time code can be used to specify locations on source and master tapes.

Editing functions

Versatile editing modes

- **A/B roll:** Uses two player VCRs for transition effects such as mix and wipe.
- **Self A-roll:** Uses one player, but allows mixes and wipes using normal playbacks and playbacks with input effects.
- **A-roll:** Uses one player, but mixes and wipes can be carried out using freeze frame playback from the recorder.
- **Sync roll:** Two players are run in synchronization, allowing you to switch between their playback as often as desired.
- **Manual effects:** Manual control allows you to vary the speed and timing of special effects at will.
- **Split editing:** Audio tracks can be mixed up to a minute sooner or later than video tracks.
- **DMC (Dynamic Motion Control) editing:** Permits editing of noiseless, variable-speed playback when operating with players that support Dynamic Tracking® (DT).

Precise edit points and transition times

Edit points can be set while viewing playback on the monitor or entered manually from the numeric keypad. Transition times for effects such as wipes and dissolves can also be set by dedicated buttons on the control panel or entered manually. Transition times range from 0 to 999 frames, for very precise effects.

Edit decision list

Auto assembly

Data for up to 99 edits can be saved in an internal edit decision list, allowing you to revise individual edits at any time for later assembly into a complete program.

Control panel snapshots

The current settings of the buttons in the video switcher and special effects sections of the control panel can be saved in memory together with edits. The state of the control panel can be instantly restored at any time by recalling the snapshot data.

Input and output of edit data

The unit is equipped with an RS-232C interface for input and output of edit decision list and snapshot data. The data can be transferred to and from personal computers or other external equipment.

Video switcher and special effects

Digital processing for high-quality video

Stable, high-quality video through 4-fsc (FXE-100) or 910 fH (FXE-100P) sampling of input video signals, 8-bit quantizing, and 4:1:1 digital processing in the signal processing section.

Digital frame memory

Both of the unit's signal buses (A and B) are equipped with digital frame memory. An internal synchronizer controls output from frame memory, for precise synchronization of A-bus and B-bus signals. This makes it possible to use VCRs without time base correction (TBC) as input sources.

Sophisticated digital effects

- **Mix:** In addition to normal dissolves, you can select mixes which apply effects such as mosaic, posterization and monochrome during the transition.
- **Wipe:** A total of 135 geometrical wipe patterns are available, along with wipe modes such as slide and scroll. Frequently used patterns may be assigned to the two user-programmable keys in the wipe pattern section.
  Wipe patterns can be given borders of a selected width and color.
- **Luminance key, chroma key:** Titles can be inserted into the video using camera output.

Input effects

Digital effects such as freeze frame, multi-screen and strobe may be applied independently to input video on bus A and bus B. Many of the digital effects can be used in combination.

This section is extracted from FXE-100/FXE-100P instruction manual.

Color correction

Color correction (white balance adjustment) can be carried out independently for A-bus and B-bus signals. Color correction parameters can be saved to memory and recalled when necessary.

Fade in/fade out

Fade in and fade out are available for use with black and white backgrounds.

Audio mixer

You can adjust the audio input level independently for each input signal, and adjust the level of audio output to the program recorder and monitor. You can also mix in audio from a microphone or auxiliary audio source for output as program audio.

Input/output channels

Video and audio input/output channels

As shown below, the unit features a rich variety of video and audio I/O channels.

Video input

Signal source	Signal format	
	S-video	Composite video
Player 1	1	1
Player 2	1	1
Recorder	1	1
Auxiliary source 1	1	1
Total	4	4

Video output

Output signal	Signal format	
	S-video	Composite video
Program signal 1	1	1
Program signal 2	1	1
Monitor signal	—	1
Total	2	3

Audio input

Signal source	Channels
Player 1	4
Player 2	4
Recorder	2
Auxiliary source 1	2
Auxiliary source 2	2
Microphone	1
Total	15

Audio output

Channels	Output signal
Program signal 1	2
Program signal 2	2
Monitor signal	2
Total	6

Switches on the connector panel can be used to select input and output signal impedance to match the impedance of connected equipment.

Black burst output

Signals from the internal black burst signal generator may be output from four output channels, to synchronize source equipment from this unit.

Control functions

In addition to three RS-422 interfaces and three RS-232C interfaces, the unit supports two GPI interfaces, allowing you to output status pulses at edit points in order to control external equipment, and to input timing pulses in order to control this unit.

Pinch-on delay measurement

Pinch-on delay (the time required for tape transport to start after a VCR receives a tape transport command) can be measured for up to three VCRs connected to this unit's RS-422 and RS-232C connectors. Measurement data is held in memory and used by the unit to adjust the timing of tape transport commands to the VCRs, for quick synchronization.

System setup menu

The system setup menu is displayed on the main monitor. It allows you to select operating modes and signal formats, and to configure the unit for use with various types of external equipment. Selections are made by rotating the search dial.

Optional accessories

The following cables are available for use with this unit.

RS-422 remote control cable

RCC-5G/10G/30G (9-pin, 5m/10m/30m): Connect RS-422 connectors on this unit to VCR RS-422 connectors.

RS-232C remote control cable

SMF-3036C null modem cable (9-pin/25-pin): Connect RS-232 connectors (D-sub 9-pin) and EDL IN/OUT connectors (D-sub 9-pin) on this unit to RS-232C connectors (D-sub 25-pin) on VCRs and external equipment.

XLR 3-pin ↔ phono-jack cross cable

Connect audio I/O connectors (phono-jack) on this unit to XLR 3-pin connectors on external equipment.

- RK-5XLRM (male, 5m)
- RK-5XLRF (female, 5m)

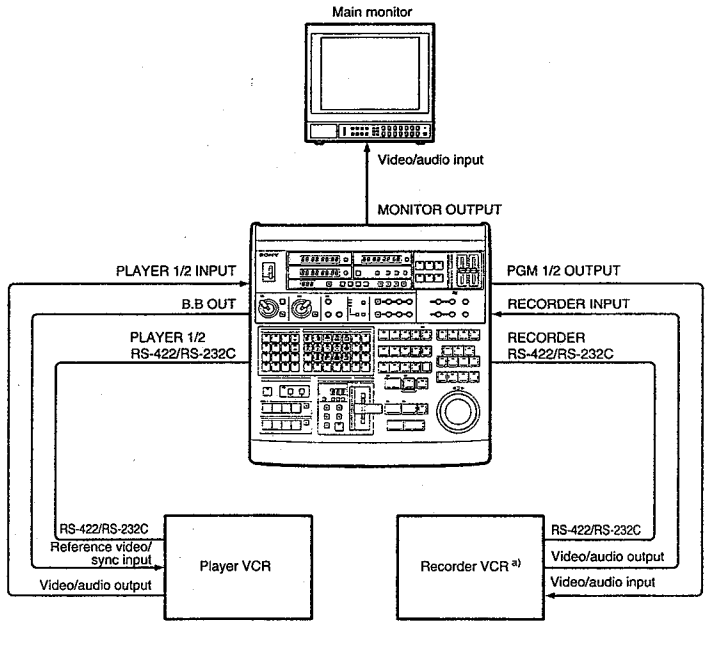
System Configuration Examples

This section presents three examples of editing systems which can be configured around this unit.
In the illustrations, connections between system components are illustrated by single lines, even if both audio and video cables are required. Arrows indicate the direction of the connection.

For more information, see "Connections" (page 3-3).

A-Roll and Cut Editing System

This example shows how to configure an editing system using only one player and one recorder.
In A-roll editing, freeze-frame playback from the recorder is read into bus B, allowing you to perform mix and wipe transitions with playback from the player VCR.

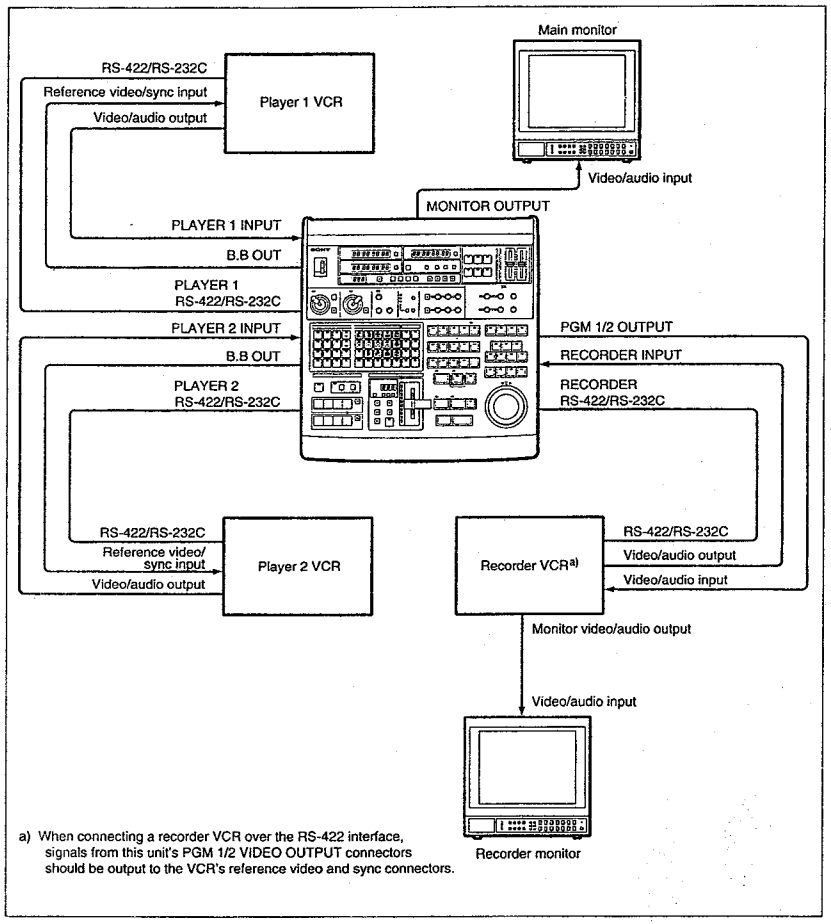


a) When connecting a recorder VCR over the RS-422 interface, signals from this unit's PGM 1/2 VIDEO OUTPUT connectors should be output to the VCR's reference video and sync connectors.

A-roll and cut editing system

A/B Roll Editing System (1)

This example shows how to configure an A/B roll editing system for mix and wipe transitions between playback from two players.

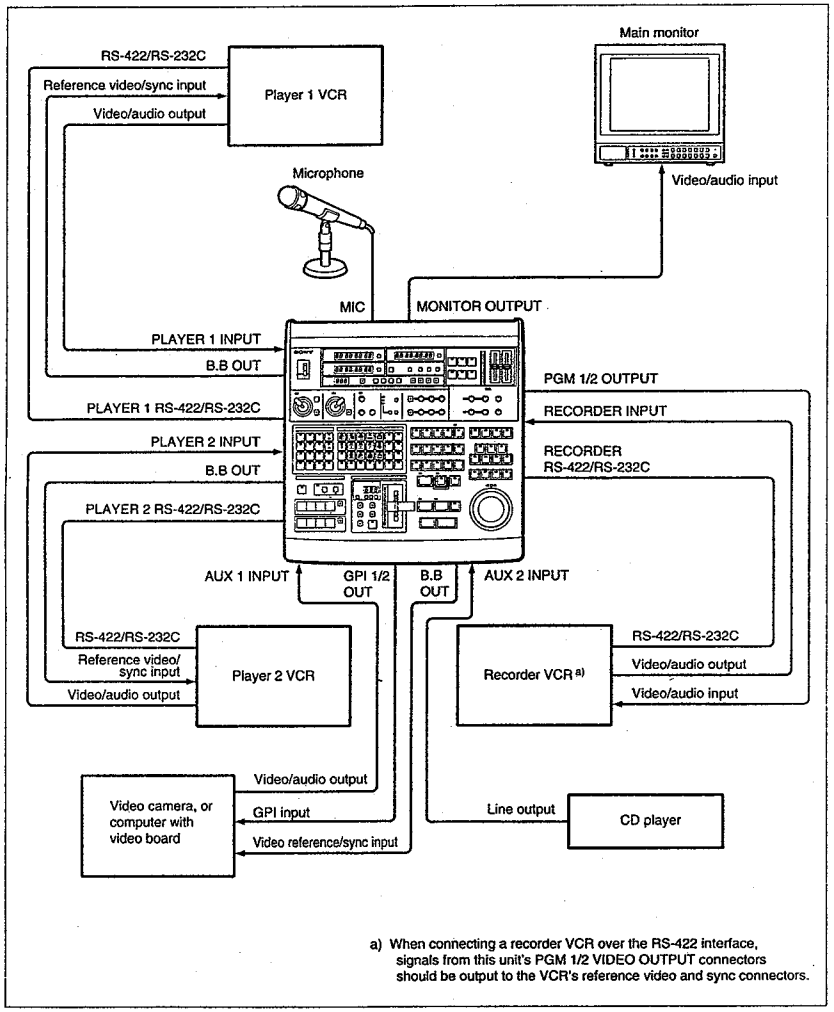


a) When connecting a recorder VCR over the RS-422 interface, signals from this unit's PGM 1/2 VIDEO OUTPUT connectors should be output to the VCR's reference video and sync connectors.

A/B roll editing system (1)

A/B Roll Editing System (2)

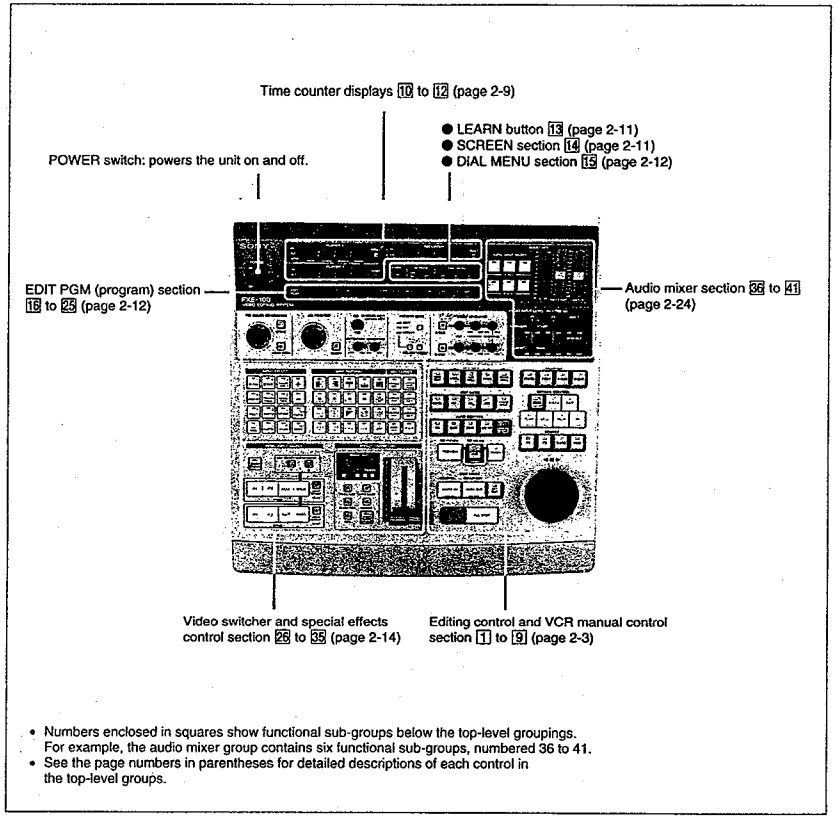
This example shows how to configure an A/B roll editing system with equipment to insert titles, narration and background music.



A/B roll editing system (2)

Control Panel

The following figure shows the top-level grouping of controls on the control panel.

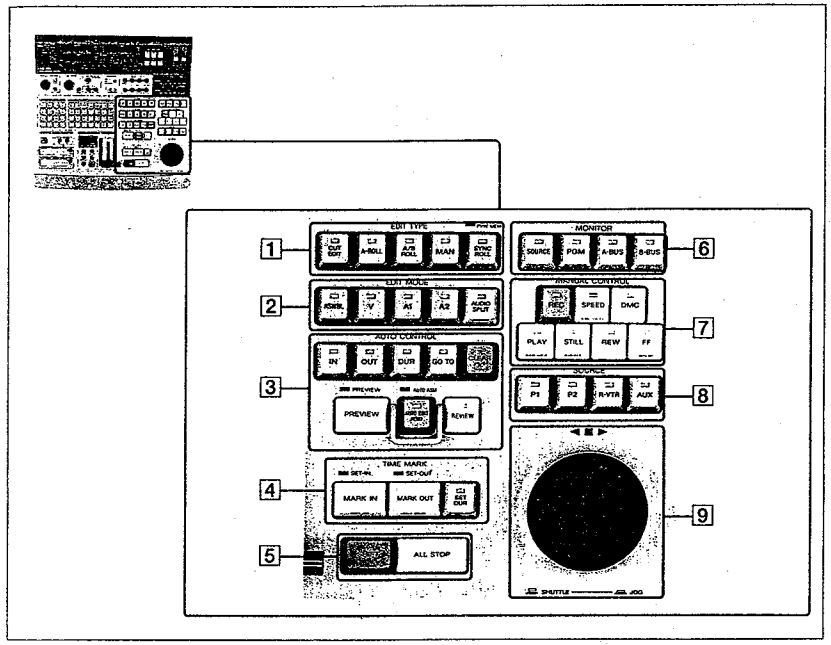


- Numbers enclosed in squares show functional sub-groups below the top-level groupings. For example, the audio mixer group contains six functional sub-groups, numbered 36 to 41.
- See the page numbers in parentheses for detailed descriptions of each control in the top-level groups.

Control panel

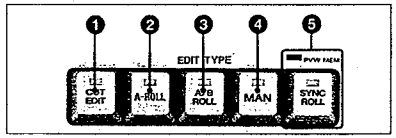
Editing Control and VCR Manual Control Section

This section includes controls for selecting the edit mode, setting edit points, and manual VCR control.



Editing control and VCR manual control section

1 EDIT TYPE section



This section includes controls for selecting the type of edit to be performed for each of the connected sources.

❶ CUT EDIT button
Press this button, turning it on, to carry out a cut edit.

❷ A-ROLL button
Press this button, turning it on, to insert effects such as wipes and mixes when editing with one recorder and one player.

❸ A/B ROLL button
Press this button, turning it on, to carry out A/B roll editing using two players and a recorder.

❹ MAN (manual) button
Press this button, turning it on, for manual control of wipes and dissolves.

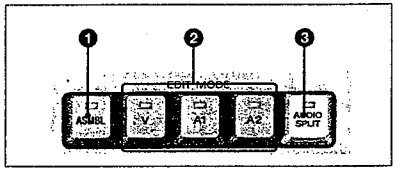
❺ SYNC ROLL (MEM CLR) button and PVW MEM indicator

SYNC ROLL: Press this button, turning it on, for sync roll editing (editing on the fly).

MEM CLR (memory clear) (= SHIFT + SYNC ROLL): After previewing an edit in sync roll mode, press this button to delete the data for that edit from memory.

PVW MEM (preview memory) indicator: In sync roll mode, this indicator lights when the data for an edit which has been previewed is present in memory.

[2] EDIT MODE selection section



❶ ASMBL (1ST EDIT) button

ASMBL (assemble): To select assemble mode, press this button, turning it on. If any of the insert mode buttons ❷ are lit, press them until they are all flashing before pressing this button.

1ST EDIT (= SHIFT + ASMBL): To select first edit mode, press this button, it starts flashing. If any of the insert mode buttons ❷ are lit, press them until they are all flashing before pressing this button.

❷ Insert mode buttons (V, A1 and A2 (TC))

To select a signal to be used in insert mode, press the corresponding button, turning it on. More than one button may be lit.

V button: Video signal

A1 button: Audio channel 1

A2 (TC) button:

A2: Audio channel 2

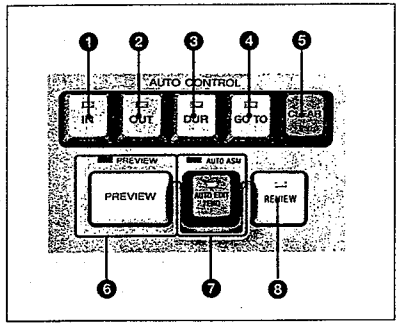
TC (= SHIFT + A2): Time code. Press this button so that it starts flashing to carry out time code insert editing.

❸ AUDIO SPLIT (SPLIT) button

AUDIO SPLIT: Press this button so that it starts flashing to split the audio and video IN points of the player or recorder.

SPLIT (= SHIFT + AUDIO SPLIT): In split editing, to check the player or recorder split offset, press this button, turning it on. The split offset will appear in the corresponding time counter display in seconds : frames format.

[3] AUTO CONTROL section



This section includes the controls for setting, revising and confirming edit points, and for executing and reviewing automatic edits.

❶ IN (TRIM –) button

IN: Press this button to display the IN point of the VCR selected in the SOURCE section [8]. The button lights, and the IN point is displayed in the corresponding time counter display [10], [11] or [12].

TRIM – (= SHIFT + IN): Press this button for fine adjustment of the time code value appearing in the time counter display of the selected VCR. Each time the button is pressed, the value is decremented by one frame.

❷ OUT (TRIM +) button

OUT: Press this button to display the OUT point of the VCR selected in the SOURCE section [8]. The button lights, and the OUT point is displayed in the corresponding time counter display.

TRIM + (= SHIFT + OUT): Press this button for fine adjustment of the time code value appearing in the time counter display of the selected VCR. Each time the button is pressed, the value is incremented by one frame.

❸ DUR (LAST X) button

DUR (duration): Press this button to display the duration value for the selected VCR. The button lights, and the duration (hours:minutes:seconds:frames) appears in the corresponding time counter display.

LAST X (= SHIFT + DUR): Press this button to undo the effect of a correction to a time code value or to restore a time code value cleared by the CLEAR button.

❹ GO TO (LAST ED) button

GO TO: To cue up the IN point or OUT point on the selected VCR, press the IN button ❶ or OUT button ❷ as appropriate, followed by this button.

LAST ED (edit) (= SHIFT + GO TO): After previewing and revising an edit, and previewing the edit again, press this button to return to the state before the revisions.

❺ CLEAR (TOTAL) button

CLEAR: To delete the IN point, OUT point, or duration setting for the selected VCR, press the IN button ❶, OUT button ❷ or DUR button ❸ as appropriate, followed by this button.

Additionally, press this button to exit from numeric keypad mode.

For more information about numeric keypad mode, see the descriptions of the TIME MARK buttons [4].

TOTAL (= SHIFT + CLEAR): Press this button to check the total duration of the edits carried out. The total is displayed in the RECORDER time counter display.

❻ PREVIEW button and PREVIEW indicator

After completing the settings for an edit, press this button to preview the edit before execution. The indicator lights and a preview begins, allowing you to check both video and audio on the monitor, from the preroll point to the postroll point.

❼ AUTO EDIT/END (AUTO ASM) button and AUTO ASM indicator

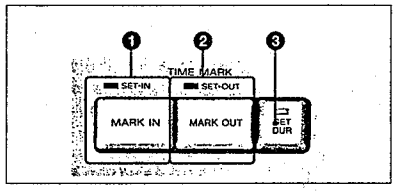
AUTO EDIT/END: Press this button, turning it on, to execute an automatic edit. Press it again after beginning an automatic edit to end the edit.

AUTO ASM (assemble) (= SHIFT + AUTO EDIT/END): Press this button to carry out continuous automatic recording. The AUTO ASM indicator lights, and continuous editing begins from an arbitrary edit stored in the edit decision list.

❽ REVIEW button

Press this button, turning it on, to review the results of an edit. The tape on the recorder is played back from the preroll point to the postroll point.

4 TIME MARK section



❶ MARK IN (SET IN) button and SET IN indicator

MARK IN: Press this button to set an IN point while watching the playback of the VCR selected in the SOURCE section 8.

SET IN (= SHIFT + MARK IN): Press this button, turning the SET IN indicator on, to enter an IN point value using the numeric keypad 30.

❷ MARK OUT (SET OUT) button and SET OUT indicator

MARK OUT: Press this button to set an OUT point while watching the playback of the VCR selected in the SOURCE section 8.

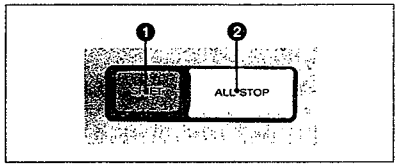
SET OUT (= SHIFT + MARK OUT): Press this button, turning the SET OUT indicator on, to enter an OUT point value using the numeric keypad 30.

❸ SET DUR (SET TRANS) button

SET DUR (duration): Press this button to enter a duration value using the numeric keypad 30.

SET TRANS (transition) (= SHIFT + SET DUR): Press this button to enter an effect transition time using the numeric keypad 30.

5 SHIFT button and ALL STOP button



❶ SHIFT button

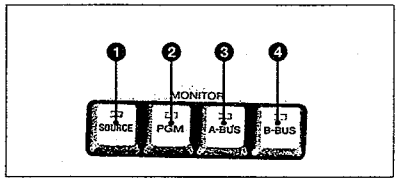
When this button is held down, each of the buttons in the editing control and VCR manual control section has the effect indicated on the front side of the button.

For details see the descriptions of the individual buttons.

❷ ALL STOP button

Press this button to stop all of the VCRs connected to the PLAYER 1 and 2 RS-422/RS-232C connectors and the RECORDER RS-422/RS-232C connectors.

6 MONITOR section



The buttons in this section select signals for output to the main monitor, connected to the MONITOR OUTPUT connectors on the connector panel. When you press them, the buttons light to indicate the selected signals.

❶ SOURCE button

Selects the source signals specified in the SOURCE section 8.

❷ PGM (program) button

Selects the program signals. Editing and special effects signals are output to the main monitor as well as to the recorder and the program monitor connected to the PGM 1/2 OUTPUT connectors.

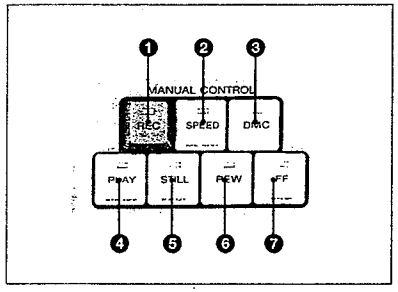
❸ A-BUS button

Selects the audio and video on the A bus. Bus signals are output directly, without passing through frame memory.

❹ B-BUS button

Selects the audio and video on the B bus. Bus signals are output directly, without passing through frame memory.

7 MANUAL CONTROL section



The buttons in this section provide manual control of the VCRs connected to the PLAYER 1 and 2 RS-422/RS-232C connectors and the RECORDER RS-422/RS-232C connectors.

❶ REC (record) button

To record the output signals from the PGM 1/2 OUTPUT connectors without making any editing settings, hold down this button and press the PLAY button, turning both buttons on.

❷ SPEED (MK-SPD) button

SPEED: In DMC (dynamic motion control) editing, press this button to check the initial playback speed set with the MK-SPD (= SHIFT + SPEED) button. The button lights, and the dynamic tracking playback speed is shown in the time counter display as a percentage of normal playback speed.

MK-SPD (mark speed) (= SHIFT + SPEED): Use this button to set the initial playback speed for DMC (dynamic motion control) editing.

❸ DMC button

Press this button, turning it on, to carry out variable-speed playback on a player which supports dynamic tracking, or to control the playback speed during DMC editing.

❹ PLAY (STB OFF) button

PLAY: To start playback, press this button, turning it on.

STB (standby) OFF (= SHIFT + PLAY): Press this button to switch the VCRs out of standby mode, so that the tapes do not remain wound on the head drums. Use this function to protect the tapes and heads when taking an appreciable break in the editing process.

❺ STILL (EJECT) button

STILL: Press this button, turning it on, to get a still picture during playback.

EJECT (= SHIFT + STILL): Press this button to eject the cassette from a VCR.

❻ REW (rewind) button

Press this button, turning it on, to rewind the tape.

❼ FF (STOP) button

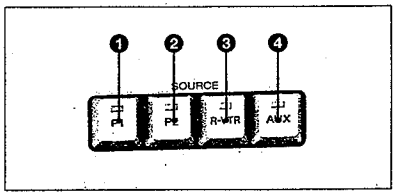
FF (fast forward): Press this button, turning it on, to fast forward the tape.

STOP (= SHIFT + FF): Press this button to stop the tape.

1-7

8 SOURCE section

The buttons in this section select the VCRs controlled from this unit, the source affected by edit point operations, and the source signals which are sent to the MONITOR OUTPUT connectors. When you press them, the buttons light to indicate the selected source.



1 P1 (player 1) button
- Selects player 1 for control from this unit.
- Selects player 1 as the source for the monitor signal.

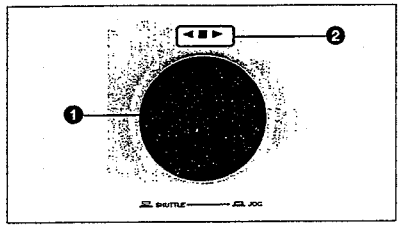
2 P2 (player 2) button
- Selects player 2 for control from this unit.
- Selects player 2 as the source for the monitor signal.

3 R-VTR (recorder) button
- Selects the recorder for control from this unit.
- Selects the recorder as the source for the monitor signal.

4 AUX (auxiliary) button

Selects auxiliary source 1 as the source for the monitor signal.

9 Search dial and playback direction indicators



1 Search dial

The search dial is used for two purposes.
- It acts as a combined shuttle and jog control, for controlling variable-speed playback and searching for edit points.
- It is used to select menu items and set parameters in the setup menu.

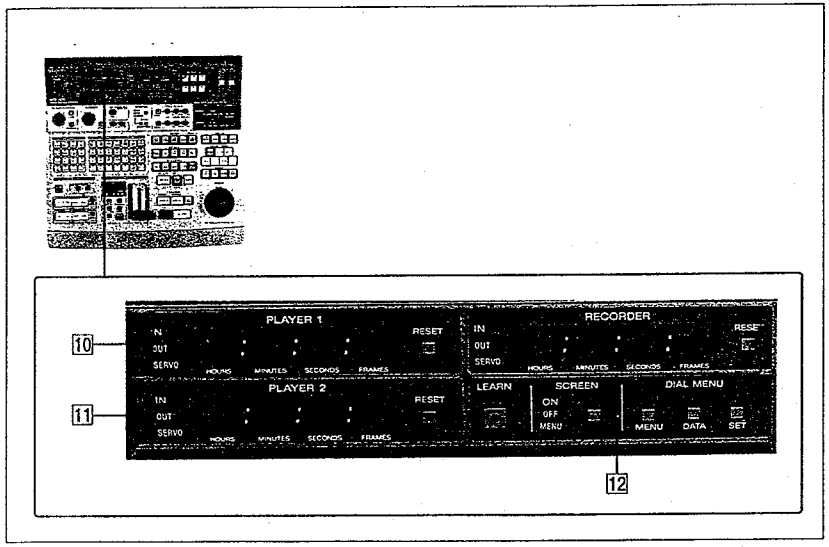
2 Playback direction indicators

These indicators light to show the status or direction of playback.

□ : Lights during still playback.
▷: Lights during forward playback.
◁: Lights during reverse playback.

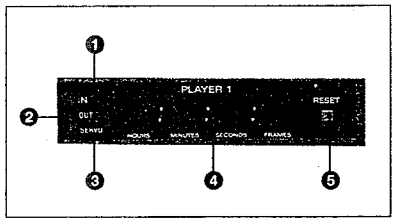
Time Counter Displays

These display time code values for each of the VCRs: player 1, player 2 and the recorder.



Time counter display panels

10 PLAYER 1 time counter display panel



1 IN indicator

Lights when an IN point appears in the PLAYER 1 time counter display 4. If the player 1 IN point is not set, this indicator flashes and "-- -- -- --" appears in the time counter display.

2 OUT indicator

Lights when an OUT point appears in the PLAYER 1 time counter display 4. If the player 1 OUT point is not set, this indicator flashes and "-- -- -- --" appears in the time counter display.

3 SERVO indicator

Lights when the drum and capstan servos of player 1 are locked.

4 PLAYER 1 time counter display

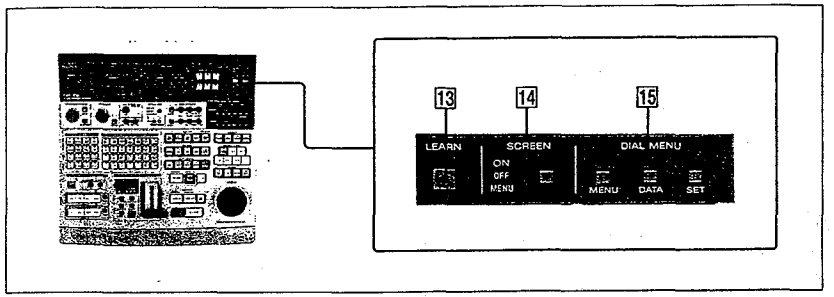
Displays time codes showing the tape position, an edit point position, tape speed during variable-speed playback, and other information relating to player 1. Also displays error codes to signal misoperations or improper settings.

❺ RESET button
When the CTL count is displayed in the time counter display, pressing this button resets it to "0:00:00:00".

11 PLAYER 2 time counter display panel
This panel has functions for player 2 corresponding to those in the PLAYER 1 time counter display panel 10.

12 RECORDER time counter display panel
This panel has functions for the recorder corresponding to those in the PLAYER 1 time counter display panel 10.
It is also used to display the following data.
- The duration for the auxiliary source connected to the AUX 1 INPUT connector on the connector panel, or values input for auxiliary source 1 with the numeric keypad.
- The total duration for the edits carried out.

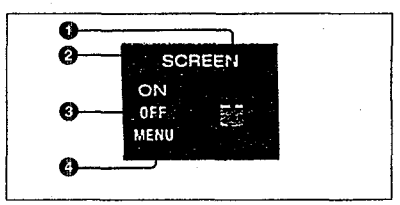
LEARN Button, SCREEN Section and DIAL MENU Section



LEARN button, SCREEN section and DIAL MENU section

13 LEARN button
Pressing this button automatically measures, for each of the VCRs connected to the PLAYER 1 and 2 RS-422/RS-232C connectors and the RECORDER RS-422/RS-232C connectors, the time required for tape transport to begin after a tape transport command is received (the pinch-on delay). These values are held in memory and used by the system to control tape transport operations, for quick synchronization of the VCRs.

14 SCREEN section



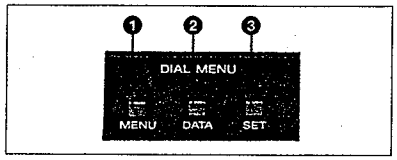
❶ SCREEN button
This button selects whether or not the monitor screen displays status information and setup menu items.
Pressing this button cycles through the three possibilities indicated by the ON ❷, OFF ❸, and MENU ❹ indicators.

❷ ON indicator
When this indicator is lit, the monitor display includes status information.

❸ OFF indicator
When this indicator is lit, the monitor does not display status or menu information.

❹ MENU indicator
When this indicator is lit, the monitor display includes setup menu information, and the setup menu can be controlled using the DIAL MENU buttons 15 and the jog-mode (depressed) search dial.

15 DIAL MENU section



The buttons in this section are used for menu operations.

For details, see Chapter 8.

❶ MENU button
To change the menu item displayed on the main monitor, hold this button down and rotate the search dial in jog mode.

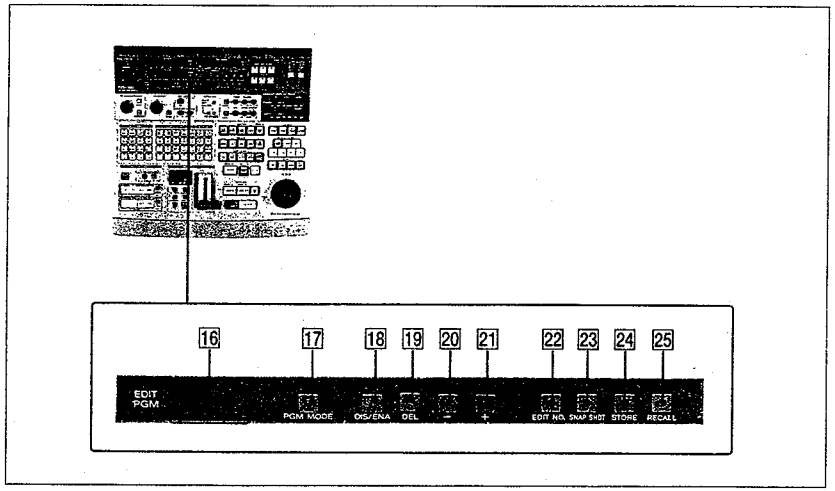
❷ DATA button
To change the setting of the currently displayed menu item, hold this button down and rotate the search dial in jog mode.

❸ SET button
Pressing this button confirms the flashing value on the screen as the new value of a setting, and saves it in memory.

EDIT PGM (Program) Section

Use the buttons in this section to control the edit program.

For details, see Chapter 7.



EDIT PGM section

16 Edit number display
Displays the current edit number.

17 PGM (program) MODE button
Press this button, turning it on, to start the edit control program.

18 DIS/ENA (disable/enable) button
Press to skip an edit that will not be needed during auto assembly recording.

19 DEL (delete) button
To delete an unneeded edit from memory, select the edit, then press this button.

20 '–' button
Press this button to select the edit immediately before the current edit. Each press of the button decrements the number appearing in the edit number display 16. Pressing the button when 001 is displayed cycles round to edit number 099. Pressing this button together with the SHIFT button decrements the number in the edit number display by 10.

21 '+' button
Press this button to select the edit immediately after the current edit.
Pressing this button together with the SHIFT button increments the number in the edit number display by 10.

22 EDIT NO. button
Press this button, turning it on, to register an edit in memory, recall it, or transfer it to or from an external device. The edit will be registered automatically when you execute the edit.

23 SNAPSHOT button
Pressing this button toggles it between lit and off. Lighting this button makes it possible to save a snapshot in memory, recall it, or transfer it to an external device. When it is lit, the control panel settings for effects will be saved to memory when you execute an edit.

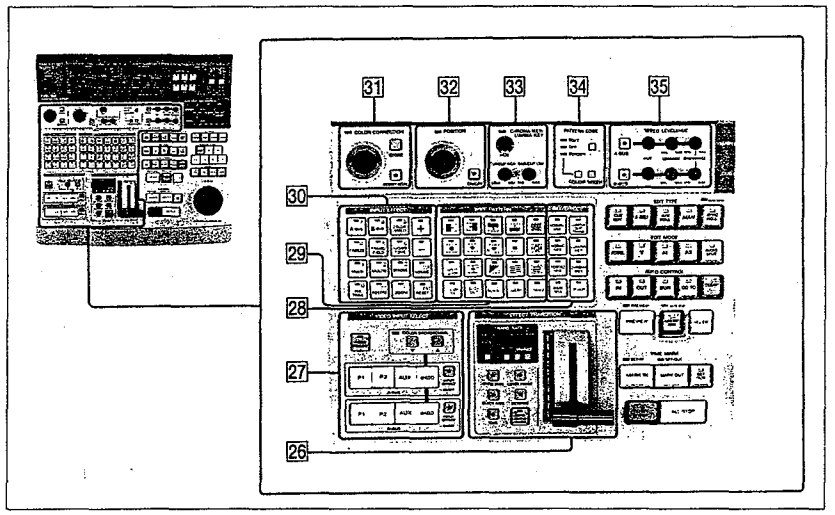
24 STORE button
After setting edit data or snapshot data, or making changes to data, press this button to save the data in memory without executing an edit. The button lights and the edit number of the following edit appears in the edit number display 16.
However
- Edit data is not saved if the EDIT NO. button 22 is off.
- Snapshot data is not saved if the SNAPSHOT button 23 is off.

25 RECALL button
Press this button to recall edit or snapshot data. Use the '–' button 20 or '+' button 21 to select the edit, then press this button, turning it on. The control panel settings immediately change to the settings for the recalled edit.
However
- Edit data is not recalled if the EDIT NO. button 22 is off.
- Snapshot data is not recalled if the SNAPSHOT button 23 is off.

1-10

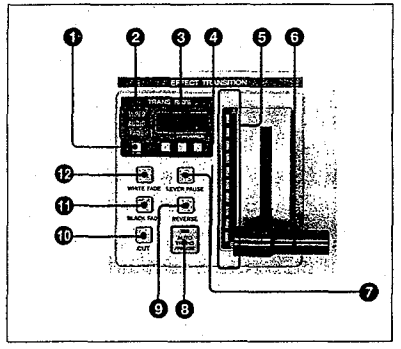
Video Switcher and Special Effects Control Section

This block of controls provides selection and control of video input signals, and various special effects.



Video switcher and special effects control section

26 EFFECT TRANSITION section



Use the controls in this section to execute transitions, and set the transition time.

❶ VIDEO/AUDIO/FADE button

Press this button to toggle the VIDEO, AUDIO, and FADE indicators on and off.

- If the AUDIO SPLIT button in the EDIT MODE section 2 is flashing (that is, if you are conducting a split edit), pressing this button lights one of the VIDEO, AUDIO, and FADE indicators, turning the others off.
- If the AUDIO SPLIT button is off, pressing this button toggles the VIDEO and AUDIO indicators together, turning the FADE indicator on or off.

❷ VIDEO, AUDIO, and FADE indicators

Press the VIDEO/AUDIO/FADE button to toggle these indicators on and off.

VIDEO/AUDIO: If you perform an operation which sets the transition time when both of these indicators are lit, the same transition time is set for both video and audio. Transition times for video only or audio only can be set only when the AUDIO SPLIT button in the EDIT MODE section is flashing.

FADE: When this indicator is lit, an effect transition time can be set for fade in/fade out.

Note

When the VIDEO and AUDIO indicators are both lit, independent transition times cannot be set for video and audio.

❸ TRANS RATE display

Displays the transition time in frames, as set by the three TRANS RATE buttons ❹ below.

❹ TRANS RATE buttons

Use these three buttons to set the transition time in frames (range: 0 to 999 frames).
Pressing one of these buttons increments the corresponding digit of the TRANS RATE display. Pressing it while holding down the SHIFT button 5 decrements the value.
The factory default setting for the transition time is 30 frames (FXE-100) or 25 frames (FXE-100P).

❺ Transition indicators

These show the progress of a transition. As the transition proceeds, progressively more of the indicators light. For example, when a transition from bus A to bus B is completed, only one indicator at the B-bus end is lit. When more than one indicator is lit, the video output is a combination of A-bus and B-bus signals.

❻ Fader lever

Use for manual control of a wipe or dissolve. The transition begins when you start to move the lever from one extremity, and ends when the lever reaches the opposite position. While the lever is in an intermediate position, the output is a combination of A-bus and B-bus signals.

The fader lever is disabled when the AUTO TRANS/PAUSE button ❽ is lit.

❼ LEVER PAUSE button

In auto transition mode, press this button to pause a wipe or dissolve at the position of the fader lever. The button lights. When the transition reaches the state represented by the position of the lever, this button begins to flash and the transition pauses. To continue the transition, either press the AUTO TRANS/PAUSE button ❽ or move the fader lever. Moving the fader lever takes the unit out of auto transition mode and puts it into manual transition mode.

❽ AUTO TRANS (transition)/PAUSE button

Pressing this button, turning it on, then pressing it once more executes an automatic transition using the transition time specified for a wipe or dissolve.
If you press this button while an auto transition is in progress, the transition is paused, and the button changes from lit to flashing. Pressing it again resumes the transition, and the button lights again. If you resume the transition by moving the fader lever, the unit leaves auto transition mode and enters manual transition mode.

❾ REVERSE button

When a wipe, luminance key or luminance clip transition is being used, pressing this button provides one of the following effects.

- For a wipe, the direction of movement of the wipe pattern is reversed.
- When the luminance key is selected, portions of the video outside of the specified luminance range are removed, instead of portions inside the range.
- For a luminance clip transition, the keying sequence from dim portions to bright portions is reversed, to key from bright portions to dim portions.

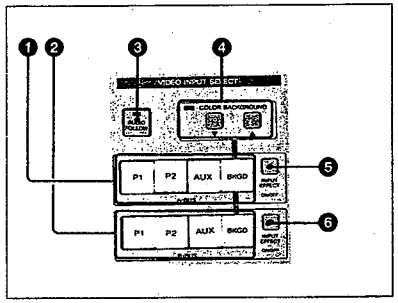
❿ CUT button

Press this button, turning it on, to switch instantaneously between A-bus video and B-bus video.

⓫ BLACK FADE button
Press this button, turning it on, to fade in from black, or to fade out to black.

⓬ WHITE FADE button
Press this button, turning it on, to fade in from white, or to fade out to white.

27 VIDEO INPUT SELECT section



❶ A-BUS video input selection buttons
To select a video source for bus A, press one of these buttons, lighting it either red or orange. When the button lights red, it means that the corresponding video signal is currently being output from the PGM 1/2 OUTPUT connectors. A button lit orange indicates that the source is selected, but is not currently being output. If the button is flashing, it means that there is no video input for the corresponding input connector (the monitor shows a grey background).
The buttons select sources as follows.

P1 button: Player 1 (the VCR connected to the PLAYER 1 INPUT connectors)
P2 button: Player 2 (the VCR connected to the PLAYER 2 INPUT connectors)
AUX button: Auxiliary source 1 (the video/audio device connected to the AUX 1 INPUT connectors)

BKGD button: The output from the internal color background generator. This button takes precedence over the other A-bus video input selection buttons. When this button is lit red, even if another button is also lit red, the output from the PGM 1/2 OUTPUT connector is the color background. To select one of the other buttons, press the BKGD button, turning it off.

❷ B-BUS video input selection buttons
Use these buttons to select a video source for bus B. However, during execution of an edit while the A-ROLL button in the EDIT TYPE section 1 is lit, these buttons go out and stay off even if pressed.

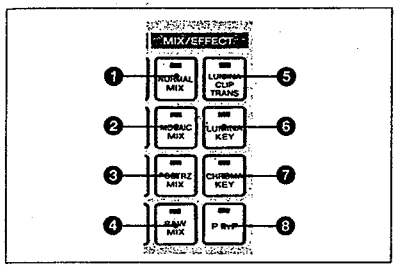
❸ AUDIO FOLLOW button
When this button is lit, selecting a video source as input to a bus automatically selects the same source for the audio input. In this case, when you carry out a wipe or dissolve, the audio signals change together with the video signals. To select the audio source independently from the video source, press this button, turning it off, then select the audio source using the appropriate button in the AUDIO INPUT SELECT section 36.

❹ Background color selection buttons (▼/▲) and COLOR BACKGROUND indicator
When the BKGD button in the video input selection buttons ❶ and ❷ for either of the buses is lit, the COLOR BACKGROUND indicator also lights. In this state, pressing the ▼ or ▲ button cycles through the available selection of 25 background colors for bus A or bus B.

❺ A-BUS INPUT EFFECT ON/OFF button
When this button is lit, the effect selected in the INPUT EFFECT section 30 is applied to bus A.

❻ B-BUS INPUT EFFECT ON/OFF button
When this button is lit, the effect selected in the INPUT EFFECT section 30 is applied to bus B.

28 MIX/EFFECT selection section



These buttons select the type of mix or key effect used to combine the video signals on the A and B buses. To make the selection, press the desired button, turning it on.

For details, see "Dissolve" (page 5-26) and "Key" (page 5-41).

❶ NORMAL MIX button
Provides a simple mix of the two signals, so that a transition from bus A to bus B is a dissolve.

❷ MOSAIC MIX button
Provides a dissolve in which the video becomes a progressively coarser mosaic to the mid-point of the transition, then returns progressively to normal.

❸ POSTRZ (posterization) MIX button
Provides a dissolve which simplifies the luminance of the video signal. The luminance cycles through the steps 16→8→4→8→16.

❹ B&W (black and white) MIX button
Provides a dissolve in which the video is changed progressively to monochrome to the mid-point of the transition, then returns progressively to normal.

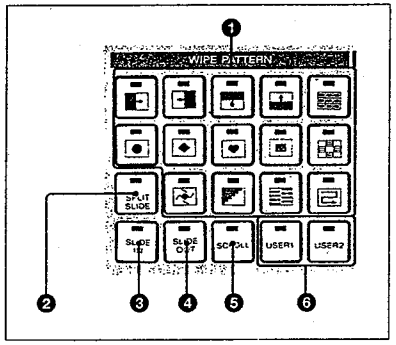
❺ LUMINA (luminance) CLIP TRANS (transition) button
Provides one type of luminance key. As the transition proceeds, portions of the old video of progressively increasing brightness are replaced by the new video.

❻ LUMINA (luminance) KEY button
Portions of B-bus video whose luminance (brightness) is equal to or higher than a specified reference level are replaced by A-bus video. The reference luminance level is specified using the controls in the CHROMA KEY/LUMINA KEY section 33.

❼ CHROMA KEY button
Portions of B-bus video of a specified hue are replaced by A-bus video. The reference hue is specified using the controls in the CHROMA KEY/LUMINA KEY section 33.

❽ P IN P (picture-in-picture) button
A small copy of the B-bus video is inserted in the A-bus video. The position of the insert picture can be controlled by the joystick in the POSITION section 32.

29 WIPE PATTERN selection section



The buttons in this section select the pattern to be used in a wipe effect. To make the selection, press the desired button, turning it on.

For details, see "Wipe" (page 5-29).

The following descriptions of buttons ❶ to ❻ assume you are making the transition from bus A to bus B.

❶ Buttons with symbols and arrows

- The symbol on the button represents the pattern with which the two video images are combined at an intermediate stage of the transition. The white portion corresponds to A-bus video, and the blue portion to B-bus video.
- The arrows show the direction of the wipe pattern.
- For the button [22] the video on the B bus rotates clockwise as the wipe proceeds.

❷ SPLIT SLIDE button

The B-bus video slides in over A-bus video in the form of stripes. When the stripes reach the far side of the screen, the remaining stripes of A-bus video begin to slide off, finally leaving only B-bus video.
The vertical or horizontal direction of the B-bus video slide can be selected with the [23][24][25][26] wipe buttons.

❸ SLIDE IN button

The B-bus video slides in over A-bus video. The vertical or horizontal direction of the B-bus video slide can be selected with the [23][24][25][26] wipe buttons. If the [23] and [25] buttons are both lit, the slide direction changes to a slant.

❹ SLIDE OUT button

The A-bus video slides out, revealing the B-bus video. The vertical or horizontal direction of the A-bus video slide can be selected with the [23][24][25][26] wipe buttons.

❺ SCROLL button

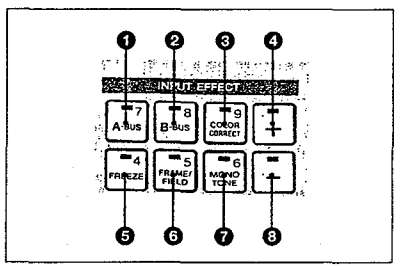
The B-bus video slides in, as A-bus video slides out. The vertical or horizontal direction can be selected with the [23][24][25][26] wipe buttons.

❻ USER 1 and USER 2 buttons

Frequently used wipe patterns and settings can be assigned to these buttons, using item 201 WIPE PATTERN in the setup menu.

For details, see Chapter 8.

[30] INPUT EFFECT section (numeric keypad)



The buttons in this section select the digital effect applied to a bus when one of the A-BUS/B-BUS INPUT EFFECT ON/OFF buttons in the VIDEO INPUT SELECT section [27] is lit. You can press more than one of these buttons for combination effects.
The buttons of the INPUT EFFECT section [30] also double as a numeric keypad for entering time code and duration values.

❶ A-BUS button / 7 key

Press this button, turning it on, to apply the input effect to bus A.

❷ B-BUS button / 8 key

Press this button, turning it on, to apply the input effect to bus B.

Note

When setup menu item 306 INPUT EFFECT SELECT is set to ON, the input effect is applied automatically to the bus selected by the fader lever position.

For details, see Chapter 8.

❸ COLOR CORRECT button / 9 key

- Press this button, turning it on, to enable the controls in the COLOR CORRECTION section [31].
- To return color correction to its original state, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.

❹ '+' key

This button is used together with other buttons in the INPUT EFFECT section to control effect selection.

For details, see the descriptions of the other buttons in this section.

❺ FREEZE button / 4 key

- To freeze the video, press this button, turning it on.
- To return to normal video, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.

❻ FRAME/FIELD button / 5 key

- When the FREEZE button ❺ is lit, this button lights automatically. When it is lit, the freeze operation captures a single field. Press this button, turning it off, to capture a whole frame (two fields) instead. A single-field freeze capture may result in less blurring if there is rapid motion in the picture.
- This button also lights automatically when the MULTI ❾, MOSAIC ⓬ and ZOOM ⓯ buttons are lit. But in these cases pressing it has no effect.

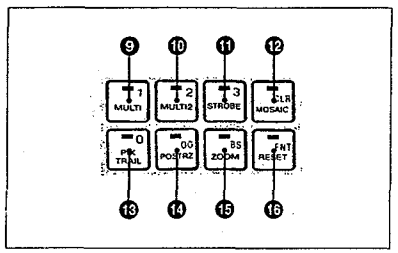
❼ MONOTONE button / 6 key

- Press this button, turning it on, to obtain a monotone (monochrome) picture. When this button is lit, pressing the COLOR CORRECT button ❸, turning it on, allows you to use the COLOR CORRECTION section [31] to adjust the monochrome tint, and save and recall it in memory.
- To return to the original color state, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.

❽ '–' key

This button is used together with other buttons in the INPUT EFFECT section to control effect selection.

For details, see the descriptions of the other buttons in this section.



❾ MULTI button / 1 key

When you press this button, turning it on, the screen is split into a 3 by 3 grid, and a reduced copy of the video appears in the top left corner. Unless you applied this effect to a freeze frame, the video continues to move. You can now paste successive copies of freeze frames in the nine boxes, as follows. When you press the '+' key, the picture in the top left corner freezes, and the current video is shown in the top center box. Press it again, and this box freezes, and the current video moves to the upper right corner, and so on.
The '–' key has the same effect, except that the boxes are pasted in the reverse direction.

For details, see "Multiple screens" (page 5-46).

To return to normal video, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.

❿ MULTI 2 button / 2 key

This button provides the same effect as the MULTI button ❾, except that the order in which the nine boxes are pasted is different.

For details, see "Multiple screens" (page 5-46).

To return to normal video, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.

⓫ STROBE button / 3 key
Pressing this button, turning it on, freezes the video at a specified frame interval, giving a stroboscopic effect. You can adjust the frame interval using the '+' key ❹ and '–' key ❸.
To return to normal video, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.

⓬ MOSAIC button / CLR (clear) key
- Pressing this button, turning it on, applies a mosaic grid to the picture. You can adjust the coarseness of the mosaic using the '+' key ❹ and '–' key ❸.
  To return to normal video, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.
- In numeric keypad mode, press this key before pressing the ENT key ⓲ to clear a numerical value.

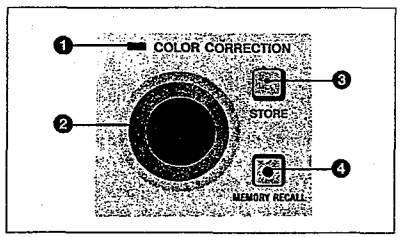
⓭ PIX TRAIL button / 0 key
Pressing this button, turning it on, produces an image trail of a certain length.
To return to normal video, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.

⓮ POSTRZ (posterization) button / 00 key
- Pressing this button, turning it on, breaks the luminance down into a limited number of levels, producing a poster effect. You can select 16, 8 or 4 levels.
  To return to normal video, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.
- Pressing this key in numeric keypad mode enters "00".

⓯ ZOOM button / BS (backspace) key
- Pressing this button, turning it on, provides a zoom function. Press the '+' key to expand the picture, and the '–' key to contract it.
  To return to normal video, either press this button once more, turning it off, or press the RESET button ⓰, turning it on.
- In numeric keypad mode, press this key before pressing the ENT key ⓲ to clear the most recently entered digit.

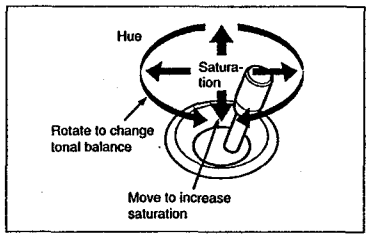
⓰ RESET button / ENT (enter) key
- When you press any of the other buttons in the INPUT EFFECT section, except for the A-BUS button ❶ and B-BUS button ❷, this button automatically goes off.
  Pressing this button, turning it on, turns off all the other buttons in the INPUT EFFECT section, and cancels their effect selections.
- In numeric keypad mode, pressing this key confirms the value entered and takes the unit out of numeric keypad mode.

31 COLOR CORRECTION section



❶ COLOR CORRECTION indicator
When you press the COLOR CORRECT button in the INPUT EFFECT section 30, turning it on, this indicator lights to inform you that it is possible to carry out color correction. Color correction is applied to the bus selected with the A-BUS and B-BUS buttons in the INPUT EFFECT section.

❷ COLOR CORRECTION joystick
When the COLOR CORRECTION indicator ❶ is lit, moving this joystick carries out the color correction. Rotating the stick cycles through all possible hues. Moving it further from the center position increases the color saturation.



Using the COLOR CORRECTION joystick

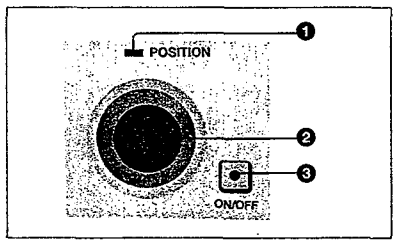
The correction range can be specified using item 205 COLOR CORRECTION ADJUSTMENT WIDTH in the setup menu.

For details, see Chapter 8.

❸ STORE button
To save the color settings selected by the COLOR CORRECTION joystick, hold down this button and press the MEMORY/RECALL button ❹.

❹ MEMORY/RECALL button
To save the color settings selected by the COLOR CORRECTION joystick, press this button while holding down the STORE button ❸. To recall the settings held in memory, press this button alone.

32 POSITION section

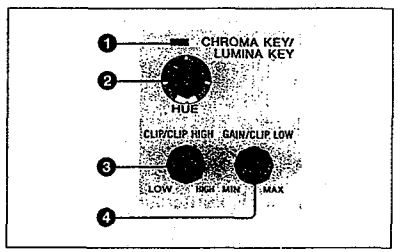


❶ POSITION indicator
Selecting a wipe pattern whose center is changeable or turning on the P IN P (picture-in-picture) button, automatically turns on this indicator, and enables the POSITION ON/OFF button ❸.

❷ POSITION joystick
When the POSITION ON/OFF button ❸ is lit, moving this joystick adjusts the position of some of the wipe patterns and the position of the insert picture in picture-in-picture mode (selected by pressing the P IN P button in the MIX/EFFECT section 28). However, the video quality of the insert picture in the picture-in-picture effect may deteriorate slightly when the insert is moved with the joystick.

❸ POSITION ON/OFF button
If you have selected a movable wipe pattern, pressing this button, turning it on, enables the POSITION joystick ❷.

33 CHROMA KEY/LUMINA KEY section



❶ CHROMA KEY/LUMINA (luminance) KEY indicator
When you press the LUMINA KEY button or the CHROMA KEY button in the MIX/EFFECT section 28, this indicator lights to inform you that the following three knobs are enabled.

❷ HUE knob
After pressing the CHROMA KEY button, turning it on, rotate this knob to select the chroma key hue.

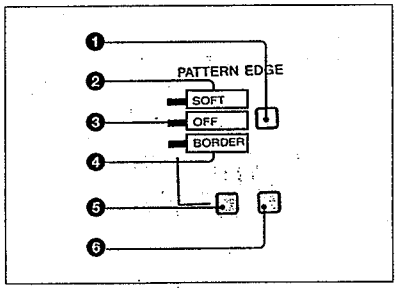
❸ CLIP/CLIP HIGH knob

- After pressing the CHROMA KEY button, turning it on, rotate this knob to select the chroma key saturation.
- After pressing the LUMINA KEY button, turning it on, rotate this knob to specify the reference level of brightness for the key. Use this control for relatively bright portions of the video.

❹ GAIN/CLIP LOW knob

- After pressing the CHROMA KEY button, turning it on, rotate this knob to adjust the gain level of the key source signal, that is the signal used to fill the background, in this system on bus A.
- After pressing the LUMINA KEY button, turning it on, rotate this knob to specify the reference level of brightness for the key. Use this control for relatively dark portions of the video.

34 PATTERN EDGE section



❶ PATTERN EDGE button

Pressing this button cycles through the SOFT indicator ❷, the OFF indicator ❸, and the BORDER indicator ❹, lighting one and turning the others off.

❷ SOFT indicator

When this indicator is on, the edges of certain wipe patterns become softer, for a fuzzy effect.

❸ OFF indicator

When this indicator is on, the wipe patterns have sharp edges.

❹ BORDER indicator

When this indicator is on, certain of the wipe patterns are given colored borders. You can adjust the border color with the COLOR button ❺, and the width with the WIDTH button ❻.

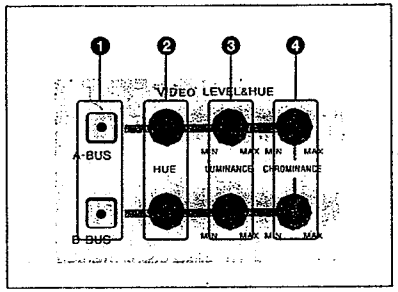
❺ COLOR button

When the BORDER indicator ❹ is lit, pressing this button cycles through the available selection of 15 border colors.

❻ WIDTH button

When the BORDER ❹ indicator is lit, pressing this button adjusts the width of the border in three steps.

35 VIDEO LEVEL & HUE section (FXE-100) VIDEO LEVEL & CHROMA PHASE section (FXE-100P)



❶ A-BUS/B-BUS buttons

Press the A-BUS button, turning it on, to make the adjustment for the A bus, and the B-BUS button, turning it on, to make the adjustment for the B bus. Press the button once more, turning it off, to return the unit to the factory default state.

❷ HUE knob (FXE-100)

Turn this knob to adjust the hue.

CHROMA PHASE knob (FXE-100P)

Turn this knob to adjust the subcarrier phase of the chrominance signal.

❸ LUMINANCE knob

Turn this knob to adjust the luminance (brightness).

❹ CHROMINANCE knob

Turn this knob to adjust the saturation.

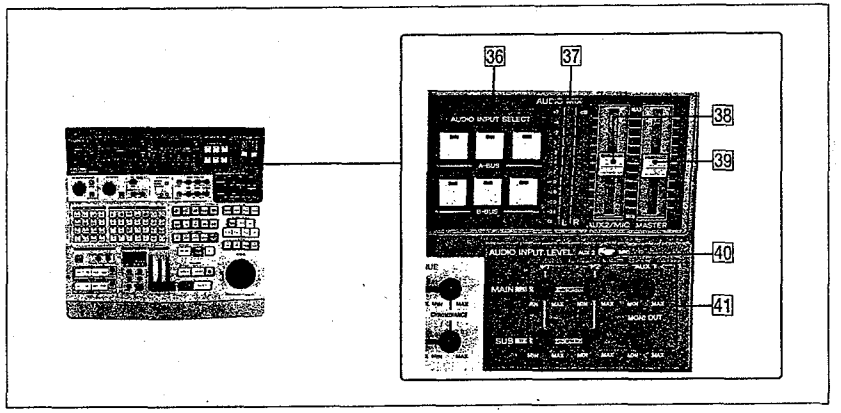
Note

The adjustment range for the HUE (FXE-100) or CHROMA PHASE (FXE-100P), LUMINANCE and CHROMINANCE knobs can be set in two steps using setup menu item 206 VIDEO LEVEL & HUE ADJUSTMENT WIDTH (FXE-100) or VIDEO LEVEL & CHROMA PHASE ADJUSTMENT WIDTH (FXE-100P).

For details, see Chapter 8.

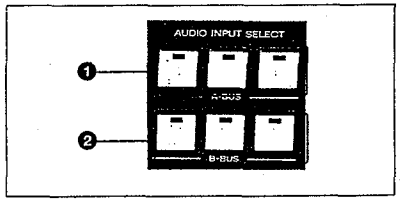
Audio Mixer Section

This block of controls provides selection and control of audio input signals.



Audio Mixer Section

36 AUDIO INPUT SELECT section



❶ A-BUS audio source selection buttons
To select an audio source for bus A, independent of the A-BUS video source selected in the VIDEO INPUT SELECT section 27, extinguish the AUDIO FOLLOW button in the VIDEO INPUT SELECT section, then press one of these buttons, lighting it.

The buttons select audio sources as follows.
P1 button: Player 1 (the VCR connected to the PLAYER 1 AUDIO L/R INPUT connectors)
P2 button: Player 2 (the VCR connected to the PLAYER 2 AUDIO L/R INPUT connectors)
AUX 1 button: Auxiliary source 1 (video/audio device connected to the AUX 1 AUDIO L/R INPUT connectors)

When the AUDIO FOLLOW button in the VIDEO INPUT SELECT section is lit, the audio from the source selected by the video input selection button (other than the BKGD button) is automatically selected as the audio source for bus A.

❷ B-BUS audio source selection buttons
Use these buttons to select an audio source for bus B.

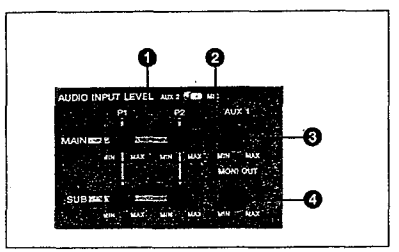
37 Audio level meters
These meters show the audio levels of left and right channels of the audio output.

38 AUX (auxiliary) 2/MIC (microphone) fader
This fader controls the AUX 2 source or microphone audio mixing level. The AUX 2/MIC switch 40 determines which level is controlled. The further up the fader is, the higher the audio level.

39 MASTER fader
This fader controls the level of the audio output from the PGM 1/2 OUTPUT connectors. The further up the fader is, the higher the audio level. When the PGM button in the MONITOR section 8 is lit, moving this fader also controls the audio level of output from the MONITOR OUTPUT connector.

40 AUX 2/MIC switch
This switch selects the audio level adjusted by the AUX 2/MIC fader 38.
AUX 2: Audio input to the AUX 2 AUDIO L/R connectors on the connector panel
MIC: Audio input to the MIC connector on the connector panel

41 AUDIO INPUT LEVEL section



❶ P1 MAIN and P2 MAIN knobs
These knobs adjust the audio levels input to the PLAYER 1 and PLAYER 2 MAIN AUDIO L/R INPUT connectors.

❷ P1 SUB and P2 SUB knobs
These knobs adjust the audio levels input to the PLAYER 1 and PLAYER 2 SUB AUDIO L/R INPUT connectors.

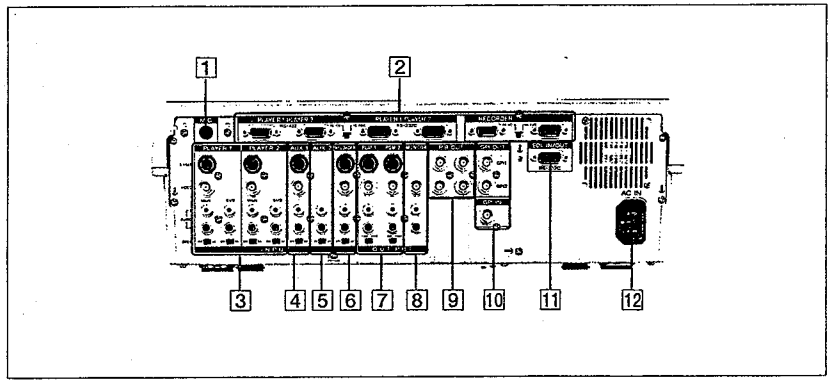
❸ AUX 1 knob
This knob adjusts the audio level input to the AUX 1 L/R INPUT connectors.

❹ MONI OUT (monitor output) knob
This knob adjusts the audio level output from the MONITOR AUDIO L/R OUTPUT connectors.

Each of the knobs ❶ through ❹ increases the volume when turned clockwise.

Connector Panel

For information about cables, see "Connections" (page 3-3).

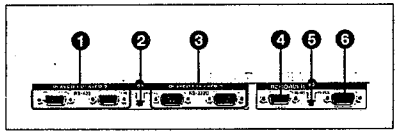


Connector panel

1 MIC (microphone) connector (monaural phone jack)

Connect a microphone. To adjust the audio input level from the microphone, set the AUX 2/MIC switch in the audio mixer section of the control panel to the MIC position, and move the AUX 2/ MIC fader.

2 VCR interface section



1 PLAYER 1/2 RS-422 connectors (D-sub 9-pin)

When using VCRs with RS-422 interfaces for player 1 and 2, connect these connectors to the RS-422 connectors (D-sub 9-pin) on the VCRs.

2 PLAYER 1/2 RS-422/RS-232C selector switch

RS-422: Set this switch to this position when connecting the player 1 and 2 VCRs to the PLAYER 1/2 RS-422 connectors 1.

RS-232C: Set this switch to this position when connecting the player 1 and 2 VCRs to the PLAYER 1/2 RS-232C connectors 3.

Note

Always turn the unit off before changing the position of the selector switches.

3 PLAYER 1/2 RS-232C connectors (D-sub 9-pin)

When using VCRs with RS-232C interfaces for player 1 and 2, connect these connectors to the RS-232C connectors (D-sub 25-pin) on the VCRs.

4 RECORDER RS-422 connector (D-sub 9-pin)

When using a VCR with an RS-422 interface for the recorder, connect this connector to the RS-422 connector (D-sub 9-pin) on the VCR.

5 RECORDER RS-422/RS-232C selector switch

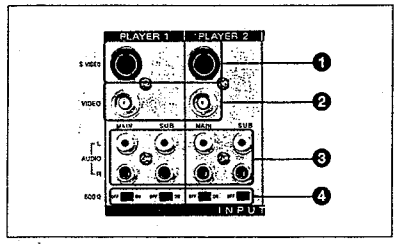
RS-422: Set the switch to this position when connecting the recorder VCR to the RECORDER RS-422 connector 4.

RS-232C: Set the switch to this position when connecting the recorder VCR to the RECORDER RS-232C connector 6.

6 RECORDER RS-232C connector (D-sub 9-pin)

When using a VCR with an RS-232C interface for the recorder, connect this connector to the RS-232C connector (D-sub 25-pin) on the VCR.

3 PLAYER 1/2 video/audio inputs



1 PLAYER 1/2 S VIDEO INPUT connectors (mini-DIN 4-pin)

Connect to the S-video output connectors of player 1 and player 2. When using these connectors, under item 101 VIDEO INPUT SELECT in the setup menu set P1 and P2 to S-V.

For details, see Chapter 8.

2 PLAYER 1/2 VIDEO INPUT connectors (BNC)

Connect to the composite video output connectors of player 1 and player 2. When using these connectors, under item 101 VIDEO INPUT SELECT in the setup menu set P1 and P2 to V.

For details, see Chapter 8.

3 PLAYER 1/2 AUDIO L/R INPUT connectors (phono jack)

Connect the left and right channel audio outputs from player 1 and player 2. Connect the channels which you want to use as the main audio input to the MAIN connectors, and those which you want to use as the subsidiary input to the SUB connectors.

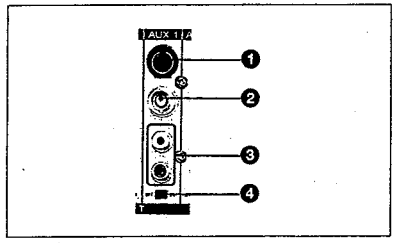
4 600 Ω termination switches

Set these switches to correspond to the connector type on the VCR connected to the PLAYER 1/2 AUDIO L/R INPUT connectors 3, as follows.

ON: 600 Ω termination. VCR connector is a Cannon XLR 3-pin connector.

OFF: 47 kΩ termination. VCR connector is a phono jack.

4 AUX (auxiliary) 1 video/audio inputs



1 AUX 1 S VIDEO INPUT connector (mini-DIN 4-pin)

Connect to the S-video output connector of the video source (video camera, VCR, laser disc player, etc.) used as auxiliary source 1. When using this connector, under item 101 VIDEO INPUT SELECT in the setup menu set AUX to S-V.

For details, see Chapter 8.

2 AUX 1 VIDEO INPUT connector (BNC)

Connect to the composite video output connector of auxiliary source 1. When using this connector, under item 101 VIDEO INPUT SELECT in the setup menu set AUX to V.

For details, see Chapter 8.

3 AUX 1 AUDIO L/R INPUT connectors (phono jack)

Connect the left and right channel audio outputs from auxiliary source 1.

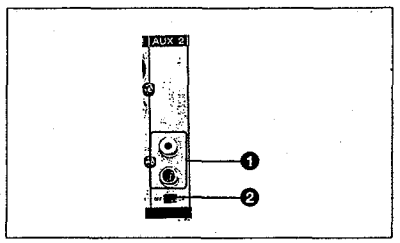
4 600 Ω termination switch

Set this switch to correspond to the connector type on the source connected to the AUX 1 AUDIO L/R INPUT connectors 3, as follows.

ON: 600 Ω termination. Source connector is a Cannon XLR 3-pin connector.

OFF: 47 kΩ termination. Source connector is a phono jack.

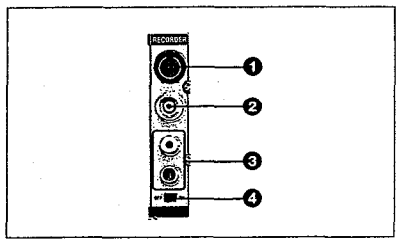
5 AUX (auxiliary) 2 audio inputs



1 AUX 2 AUDIO L/R INPUT connectors (phono jack)
Connect the left and right channel audio outputs from the audio source (CD player, tape recorder, etc.) used as auxiliary source 2. To adjust the audio input level from auxiliary source 2, set the AUX 2/MIC switch on the audio mixer section of the control panel to the AUX 2 position, and move the AUX 2/MIC fader.

2 *600 Ω termination switch*
Set this switch to correspond to the connector type on the source connected to the AUX 2 AUDIO L/R INPUT connectors 1, as follows.
ON: 600 Ω termination. Source connector is a Cannon XLR 3-pin connector.
OFF: 47 kΩ termination. Source connector is a phono jack.

6 RECORDER video/audio inputs



1 RECORDER S VIDEO INPUT connector (mini-DIN 4-pin)
Connect to the S-video output connector of the recorder. When using this connector, under item 101 VIDEO INPUT SELECT in the setup menu set RECORDER to S-V. (The factory default setting is S-V.)

For details, see Chapter 8.

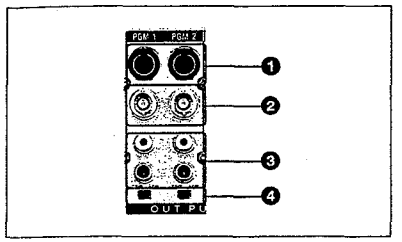
2 RECORDER VIDEO INPUT connector (BNC)
Connect to the composite video output connector of the recorder. When using this connector, under item 101 VIDEO INPUT SELECT in the setup menu set RECORDER to V.

For details, see Chapter 8.

3 RECORDER AUDIO L/R INPUT connectors (phono jack)
Connect the left and right channel audio outputs from the recorder.

4 600 Ω termination switch
Set this switch to correspond to the connector type on the recorder, as follows.
ON: 600 Ω termination. Source connector is a Cannon XLR 3-pin connector.
OFF: 47 kΩ termination. Source connector is a phono jack.

7 PGM (program) 1/2 video/audio outputs



These connectors output the program output, including all edits and special effects. The PGM 1 and PGM 2 connectors provide exactly the same video and audio signals.

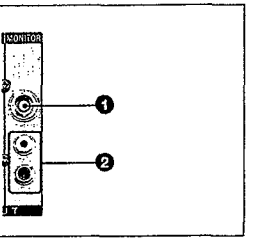
1 PGM (program) 1/2 S VIDEO OUTPUT connectors (mini-DIN 4-pin)
Connect to the S-video input connectors of the recorder or program monitor.

2 PGM (program) 1/2 VIDEO OUTPUT connectors (BNC)
Connect to the composite video input connectors of the recorder or program monitor.

3 PGM (program) 1/2 AUDIO L/R OUTPUT connectors (phono jack)
Connect to the left and right channel audio input connectors of the recorder or program monitor.

4 –7.5 dB/+4 dB termination switches
Set the output level to –7.5 dBs or +4 dBs for output of standard audio signals from the PGM 1/2 AUDIO L/R OUTPUT connectors 3 depending on the recorder connector type.
–7.5 dB: –7.5 dBs output [1] (when input impedance on recorder side is 47 kΩ). Set to this position when connector type is phono jack.
+4 dB: +4 dBs output [1] (when input impedance on recorder side is 600 Ω). Set to this position when connector type is Cannon XLR 3-pin.

8 MONITOR output section



These connectors output the signals selected using the MONITOR section and SOURCE section of the control panel.

1 MONITOR VIDEO OUTPUT connector (BNC)
Connect to the composite video input connector of the video monitor used as the main monitor.

2 MONITOR AUDIO L/R OUTPUT connectors (phono jack)
Connect to the left and right channel audio input connectors of the main monitor.

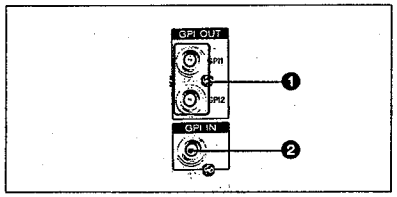
9 B.B OUT (black burst output) connectors (BNC)

These connectors provide black burst signals from the internal sync generator. For video synchronization with sources, connect these to the reference video input, sync input, or GEN LOCK connectors of the source equipment.

1) 0 dBs = 0.775 Vrms

1-18

10 GPI (general purpose interface) connectors



❶ GPI 1/2 OUT connectors (BNC)

These connectors output timing pulses for controlling the operation of a titler, computer, or other external device. You can adjust the timing of the pulses in units of one frame under items 307 GPI 1 TIMING and 308 GPI 2 TIMING in the setup menu.

For details, see Chapter 8.

❷ GPI IN connector (BNC)

When this unit is being controlled from external equipment such as another editor, connect this connector to the GPI output connector of the other equipment to input the timing pulses from the other equipment.

11 EDL IN/OUT connector (D-sub 9-pin)

This connector transfers EDL (edit decision list) data. Connect it to the RS-232C connector of a computer or other external device equipped with an EDL management function.
Select input or output of the data under item 311 EDL SWITCH in the setup menu.

For details, see Chapter 8.

12 AC IN connector

Connect the unit to a 120 V AC power supply using the AC power cord supplied.

1-19

Precautions

Safety precautions

Power

Operate the unit on:

- 120 V AC, 50/60 Hz (FXE-100)
- 220-240 V AC, 50/60 Hz (FXE-100P).

Do not place or drop heavy objects on the power cord. Protect the cord from damage. Using a damaged power cord is dangerous. Do not grasp the cord when pulling out of a power outlet. Grasp by the plug.

Do not disassemble

Do not open the cabinet. There is a danger of shock if you touch the parts inside the unit.

Do not drop foreign objects into the unit

Do not drop flammable or metal objects into the unit. Protect from water and liquids. Foreign objects dropped into the unit can cause malfunctions.

In case of trouble

If you notice unusual noises, smells, or smoke coming from the unit, turn it off immediately. Pull the power plug from the outlet, disconnect external equipment and contact your Sony dealer or qualified Sony service personnel.

Usage precautions

Operating and storage conditions

Avoid using or storing the unit in places which are

- very hot or cold (operating temperature range 5°C to 40°C or 41°F to 104°F).
- exposed to direct sunlight, or near heaters.
- damp or dusty.
- subject to severe vibrations.
- near equipment generating strong electromagnetic emissions.
- near transmitting stations generating strong radio waves.

Protect from shocks

Avoid dropping the unit or subjecting it to strong shocks.

Maintenance

Clean the cabinet and panels by wiping with a soft, dry cloth. Remove severe stains by wiping with a cloth moistened with a neutral solvent, then wipe with a soft, dry cloth. Do not clean with alcohol, benzine, thinner, or other volatile liquids. Doing so may damage the paint or finish.

Transporting the unit

When transporting the unit, protect from shocks by packing in the supplied carton or a comparable case.

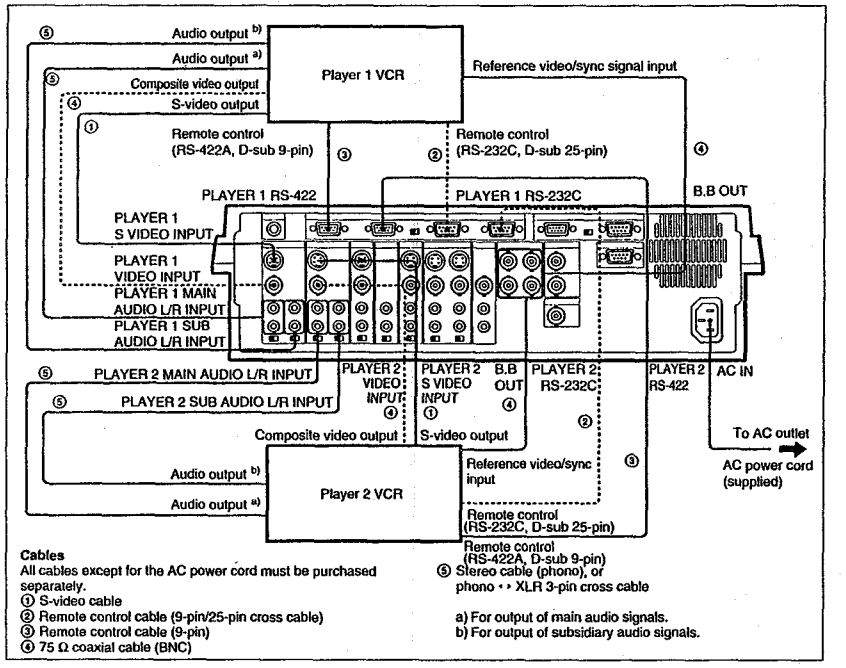
Connections

This section describes connections to VCRs and other external equipment.

For more information about configuring a system for a particular purpose, see "System Configuration Examples" (page 1-6).

Player 1 and Player 2 VCR Connections

Connect two players to perform A/B roll editing. Cut editing and A-roll editing are possible using one player.



Player 1 and player 2 VCR connections

Notes

- Depending on the connectors utilized here or on the connected equipment, settings may have to be changed on the connector panel or in the setup menu.

  For details, see "Switch Settings and System Setup" (page 3-8).

- After connecting the player and recorder VCRs, press the LEARN button on the control panel.

  For details about the LEARN button, see "Measuring pinch-on delay" (page 3-15).

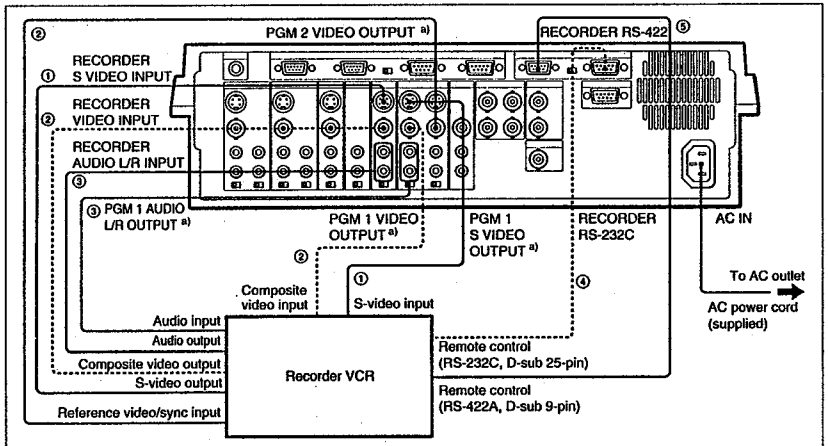
- Depending on the connected VCRs, device constants may have to be set using setup menu items 401 and 402.

  For details, see Chapter 8.

Recorder VCR Connections

When the recorder's video and audio output connectors are connected to this unit's RECORDER INPUT connectors, freeze frame video may be input from the recorder to carry out mixes and wipes during A-roll editing. Also, signals can be input from the recorder in order to check the contents of the master tape on the main monitor.

For more information about monitor connections, see "Main Monitor and Program Monitor Connections" (page 3-5).



Cables
All cables except for the AC power cord must be purchased separately.
① S-video cable
② 75 Ω coaxial cable (BNC)
③ Stereo cable (phono), or phono ‹ › XLR 3-pin cross cable
④ Remote control cable (9-pin/25-pin cross cable)
⑤ Remote control cable (9-pin)

a) PGM 1 and PGM 2 output the same signals. Either may be connected as convenient.

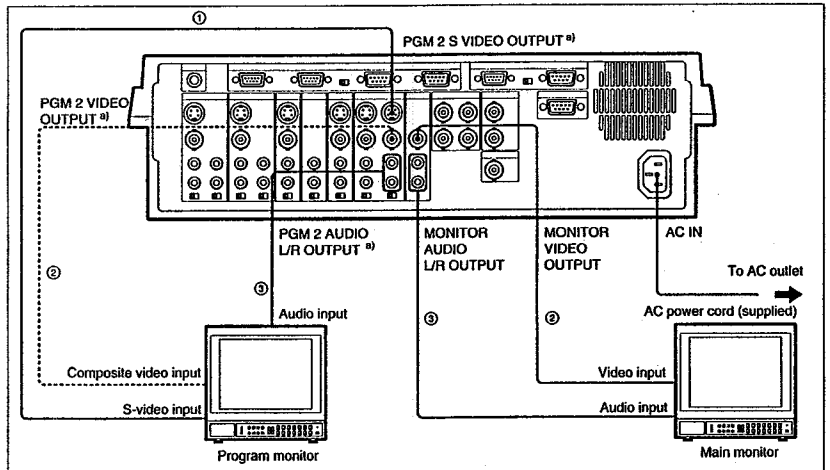
Recorder VCR connections

Notes

- As input to the recorder's reference video input connector, use signals from this unit's PGM 1/2 VIDEO OUTPUT connectors instead of signals from the B.B OUT connector.
- If the correct recorder freeze frame cannot be read in during A-roll editing, adjust the timing of freeze frame input under item 108 A-ROLL TIMING OFFSET in the setup menu.
- Depending on the connectors utilized here or on the connected equipment, settings may have to be changed on the connector panel or in the setup menu.
  For details, see "Switch Settings and System Setup" (page 3-8).
- After connecting the player and recorder VCRs, press the LEARN button on the control panel.
  For details about the LEARN button, see "Measuring pinch-on delay" (page 3-15).
- Depending on the connected VCR, a device constant may have to be set using setup menu item 403.
  For details, see Chapter 8.

Main Monitor and Program Monitor Connections

Connecting a monitor to each VCR allows you to monitor the video and audio of each VCR continuously. But this unit is also equipped with a MAIN MONITOR connector, which allows you to monitor preview signals, program signals, and the signals of the connected VCRs.
A program monitor may be connected in order to monitor the signals that are sent to the recorder.



Cables
All cables except for the AC power cord must be purchased separately.
① S-video cable
② 75 Ω coaxial cable (BNC)
③ Stereo cable (phono)

a) PGM 1 and PGM 2 output the same signals. Either may be connected as convenient.

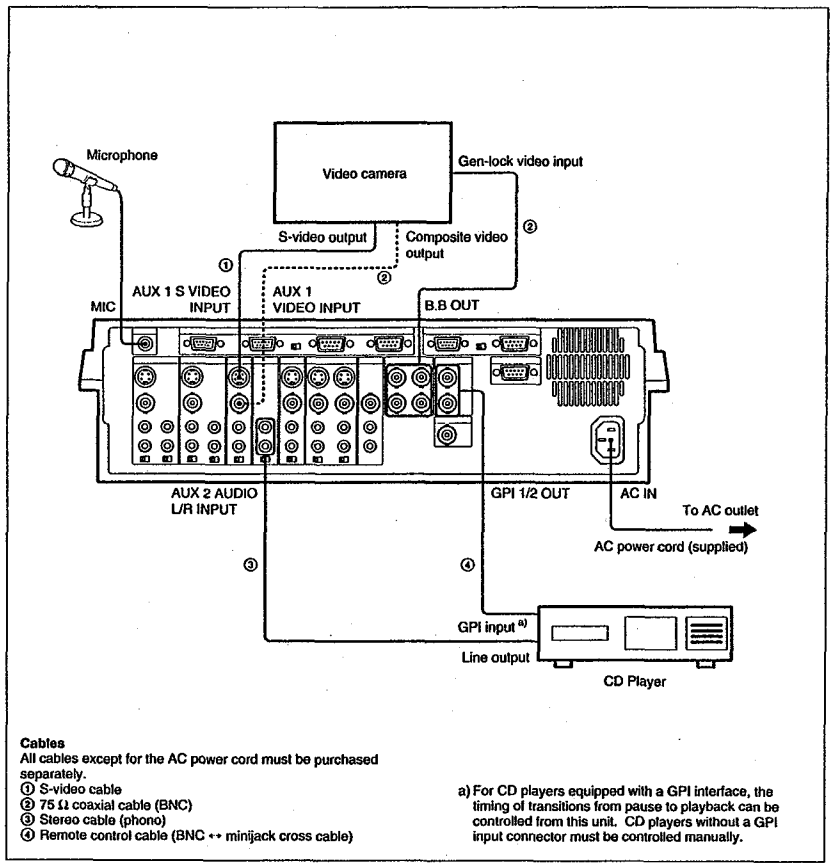
Main monitor and program monitor connections

Note

Depending on the connectors utilized here or on the connected equipment, settings may have to be changed on the connector panel or in the setup menu.

For details, see "Switch Settings and System Setup" (page 3-8).

Video Camera, CD Player and Microphone Connections



Cables
All cables except for the AC power cord must be purchased separately.
① S-video cable
② 75 Ω coaxial cable (BNC)
③ Stereo cable (phono)
④ Remote control cable (BNC ↔ minijack cross cable)

a) For CD players equipped with a GPI interface, the timing of transitions from pause to playback can be controlled from this unit. CD players without a GPI input connector must be controlled manually.

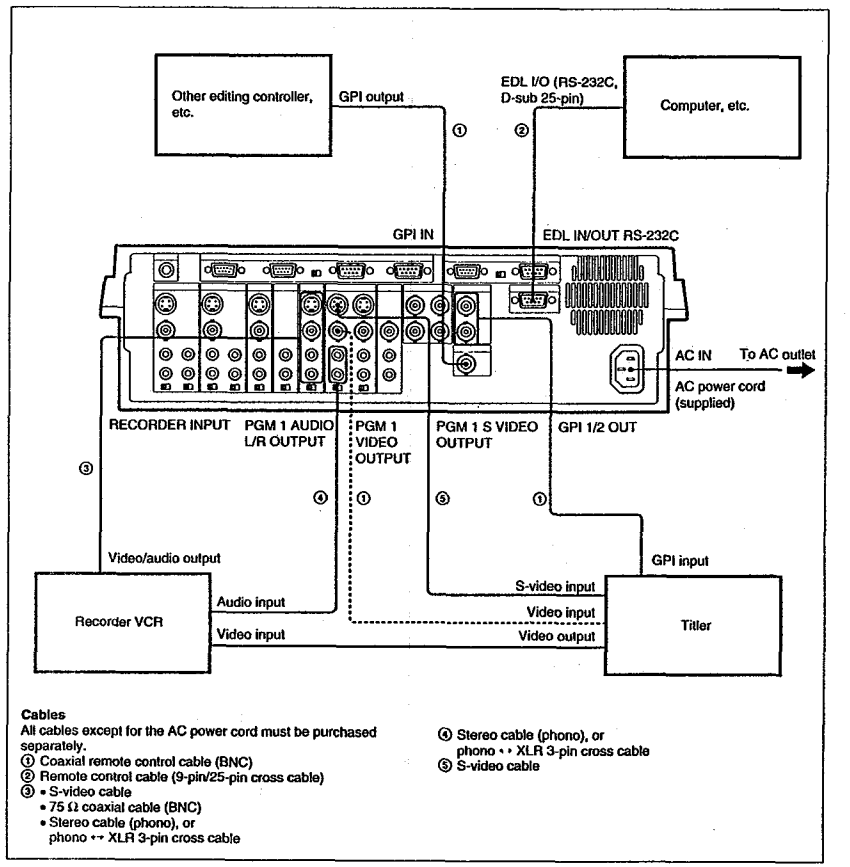
Video camera, CD player and microphone connections

Note

Depending on the connectors utilized here or on the connected equipment, settings may have to be changed on the connector panel or in the setup menu.

For details, see "Switch Settings and System Setup" (page 3-8).

Titler, Computer and Editing Controller Connections



Cables
All cables except for the AC power cord must be purchased separately.
① Coaxial remote control cable (BNC)
② Remote control cable (9-pin/25-pin cross cable)
③ • S-video cable
• 75 Ω coaxial cable (BNC)
• Stereo cable (phono), or phono ↔ XLR 3-pin cross cable
④ Stereo cable (phono), or phono ↔ XLR 3-pin cross cable
⑤ S-video cable

Titler, computer and editing controller connections

Note

Depending on the connectors utilized here or on the connected equipment, settings may have to be changed on the connector panel or in the setup menu.

For details, see "Switch Settings and System Setup" (page 3-8).

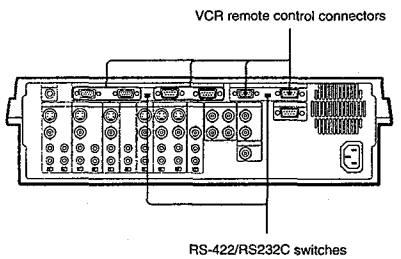
Switch Settings and System Setup

Depending on which connectors are used on the connector panel, and the type of connectors used by connected equipment, it may be necessary to set connector panel switches or change settings in the setup menu.
This section explains the correct settings for each group of connectors.

For details regarding the setup menu, see Chapter 8.

VCR remote control connectors

Set the RS-422/RS-232C switch as follows, depending on the connector used to control the VCR.



Connector used	RS-422/RS-232C switch setting
RS-422	RS-422
RS-232C	RS-232C

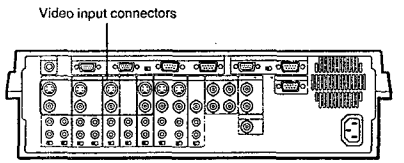
VCR remote control connectors and RS-422/RS-232C switches

Notes

- Always connect the same connectors for both player 1 and player 2. For example, it is not possible to connect player 1 using the RS-232C connector and player 2 using the RS-422 connector.
- Always turn the unit off before changing the RS-422/RS-232C switch setting. If you have changed the setting with the power on, turn unit off and power up again.

Video input connectors

Set item 101 "VIDEO INPUT SELECT" in the setup menu as follows, depending on the connectors used for video input.



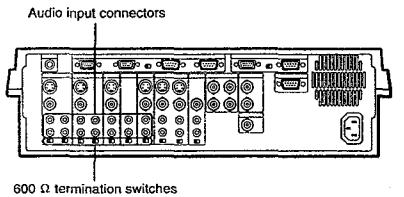
Connector used	Menu item 101 VIDEO INPUT SELECT setting
S VIDEO	S-V [a]
VIDEO	V

a) Factory preset to S-V

Video input connectors and VIDEO INPUT SELECT setting

Audio input connectors

Set the 600 Ω audio input termination switches as follows, depending on the type of audio output connectors on the connected equipment.

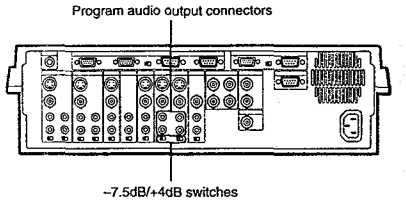


Type of connector on connected equipment	600 Ω termination switch setting
Phono jack	OFF
Cannon XLR 3-pin	ON

Audio input connectors and 600 Ω termination switches

Program audio output connectors

Set the –7.5dB/+4dB audio output switches as follows, depending on the type of audio input connectors on the connected equipment.

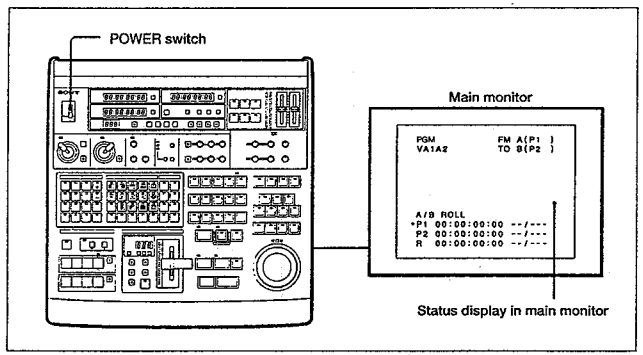


Type of connector on connected equipment	–7.5dB/+4dB switch setting
Phono jack	–7.5dB
Cannon XLR 3-pin	+4dB

Program audio output connectors and –7.5dB/+4dB switches

About the Status Display

When you turn on this unit and the main monitor, the following information is displayed to indicate the current edit mode, sources, and edit points.

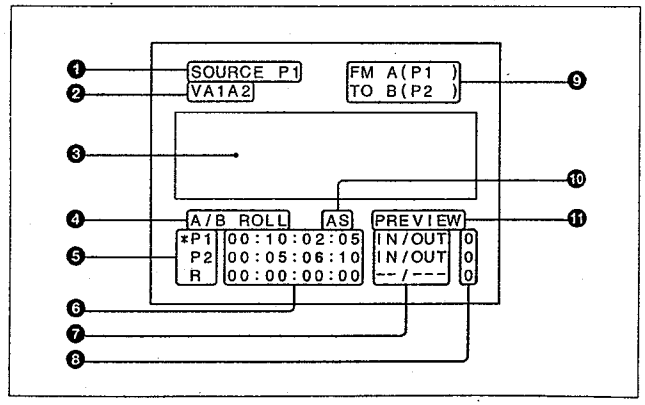


Status display

Interpreting the status display

This section lists the information which appears in each section of the status display.

- See the page numbers given in parentheses after each item for detailed explanations of display items or related procedures.
- The following abbreviations are used for sources and the recorder.
  P1: Player 1
  P2: Player 2
  R: Recorder
  AUX: Auxiliary source 1



Information in status display

❶ Monitor signal area (page 4-11)
Displays the source of the signals selected with the buttons in the MONITOR section and currently being output from the MONITOR OUTPUT connectors to the main monitor.

SOURCE P1 (P2, R-VTR, AUX): A source selected with the SOURCE button in the MONITOR section and the buttons in the SOURCE section
PGM: The same signals as are output from the PGM 1/2 OUTPUT connectors
A-BUS P1 (P2, AUX): The source selected for bus A
B-BUS P1 (P2, AUX): The source selected for bus B

❷ Edit mode area (page 5-3)
Displays the mode selected in the EDIT MODE section.

VA1A2: Signal channel(s) selected with insert mode buttons (V: Video channel, A1: Audio channel 1, A2: Audio channel 2)
ASMBL: Assemble mode
1ST-EDIT: First edit mode
TC-INS: Time code insert mode

❸ Error message area (page A-2)
Error messages are displayed here.

❹ Edit type area (page 5-9)
Displays the edit type selected in the EDIT TYPE section.

CUT P1 (P2, AUX): Cut edit using P1, P2, or AUX on bus A
A-ROLL P1 (P2, AUX): A-roll edit using P1, P2, or AUX on bus A
A/B ROLL: A/B roll edit
MANUAL: Manual effects edit
SYNC-ROLL: Sync roll edit

❺ Selected VCR (page 4-2)
- An asterisk (*) precedes the name of the selected VCR.
- When auxiliary source 1 is selected by pressing the AUX button in the SOURCE section, "R" changes to "AUX".

❻ Time data area (page 5-13)

- Displays the IN point, OUT point and duration for each VCR in (hours: minutes: seconds: frames) format.

Note

Time code displayed in this area may be slightly later than time code signals actually recorded on the tape. If you want to superimpose time code on signals sent to the MONITOR OUTPUT connectors for use in off-line editing, use a time code reader.

With the FXE-100, a period (.) is displayed instead of a colon (:) between minutes and seconds when drop-frame mode time code is found on the recorded tape.

Example: 00:10.02:05
↑— Drop-frame mode time code was found on the recorded tape. This period is displayed regardless of the setting of setup menu item 110 FRAME CONTROL MODE (FXE-100 only).

A period (.) is displayed instead of a colon (:) between seconds and frames when time code has been interpolated from CTL signals because time code signals could not be read from the tape.

Example: 00:10:02.05
↑— Indicates that time code data has been interpolated from CTL signals.

- Displays the split offset (distance between video IN point and audio IN point) during split editing.

For details, see "Setting Independent Video and Audio IN Points—Split Editing" (page 6-8).

- Displays initial DT speed in DMC editing.

For details, see "Editing Variable-Speed Playback—DMC Editing" (page 6-13).

❼ Edit points area (page 5-13)

- Indicates whether or not IN/OUT points have been set for sources and recorder.
  IN/– – –: IN point is set.
  – –/OUT: OUT point is set.
  IN/OUT: IN and OUT points are set.
  – –/– – –: IN and OUT points are not set.
- Indicates the type of data displayed in the time data area ❻ when the IN, OUT or DUR button in the AUTO CONTROL section are pressed.
  IN: IN point is being displayed.
  OUT: OUT point is being displayed.
  DUR: Duration is being displayed.
- In numeric keypad mode, indicates the type of data being entered.
  SET IN: IN point is being entered.
  SET OUT: OUT point is being entered.
  SET DUR: Duration is being entered.

❽ Sync grade display (page 5-65)

Displays the synchronizing precision selected with item 301 SYNC GRADE in the setup menu, when setup menu item 303 SYNC GRADE DISPLAY is set to ON. Note that the factory default setting for this item is OFF, for no sync grade display.
1: ACCURATE
2: +/–1 FRAME
3: ROUGH
4: PREROLL & PLAY

For details, see Chapter 8.

❾ FROM source/TO source area (page 5-60)

When two sources are used, displays which signals are replaced during a transition.
FM: FROM source
TO: TO source
A: A bus
B: B bus
P1, P2, AUX: Source name

❿ "AS" area (page 6-8)

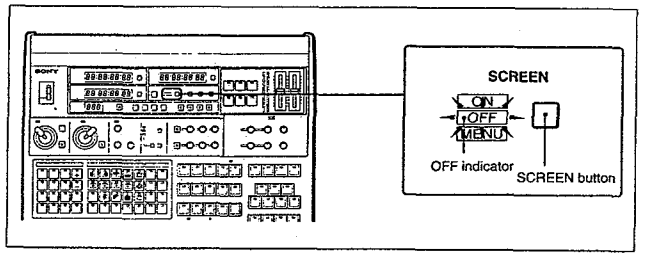
Shown when split editing (Audio Split) has been selected.

⓫ Operation area

Shows the current operation.
PREVIEW: Preview (page 5-61)
AUTO EDIT: Automatic edit execution (5-63)
REVIEW: Review (5-68)
AUTO ASMBL: Automatic assembly (5-66)

About the Status Display

To turn off the main monitor status display
Press the SCREEN button until the OFF indicator lights.



Turning off the status display

VCR Preparations

After connecting the VCRs, carry out the following preparations.

For more information about settings on the VCR side, please consult your VCR manuals.

- Insert a cassette.
- Set the REMOTE/LOCAL switch to REMOTE.
- Adjust the following:

Player VCRs
- Audio playback level
- Tracking
- Skew

Recorder VCR
- Video recording level
- Audio recording level
- Tracking

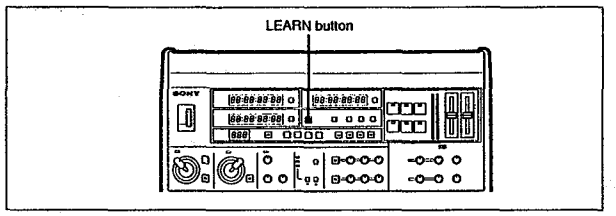
Measuring pinch-on delay

When a VCR receives a tape transport command, the tape does not begin to move instantly. A certain amount of time, called the pinch-on delay, is required for the mechanical process of initiating tape transport. This unit has a function for measuring the pinch-on delay for up to three VCRs, connected to the PLAYER 1, PLAYER 2, and RECORDER RS-422 and RS-232C connectors. Measurement data is held in memory and used by the unit to synchronize VCRs as quickly as possible. After connecting the VCRs, be sure to press the LEARN button.

After connecting the VCRs, be sure to measure the pinch-on delay as follows.

1 Insert tapes into each of the VCRs connected to the RS-422 and RS-232C connectors.

2 Press the LEARN button on the control panel, turning it on.



Measuring pinch-on delay

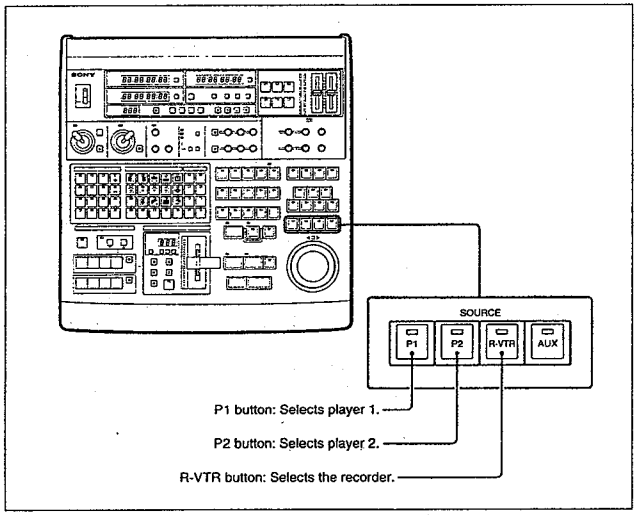
The VCRs begin to run, and the delay is measured automatically.
Measurement data is held in memory for about one week after the unit is turned off.
A check of preroll times which have been selected for each of the VCRs in the setup menu is also carried out. If the preroll times are too short, error codes are displayed in the corresponding time counter displays.

Controlling the VCRs

The following section explains how to use this unit for manual control of two player VCRs and one recorder VCR, connected to the PLAYER 1/2 RS-422/RS-232C connectors and the RECORDER RS-422/RS-232C connectors on the connector panel.

Selecting a VCR

When setting VCR edit points, or manually controlling VCR tape transport from this unit, select the VCR for each operation by pressing one of the P1, P2 or R-VTR buttons in the SOURCE section of the control panel.



Selecting a VCR

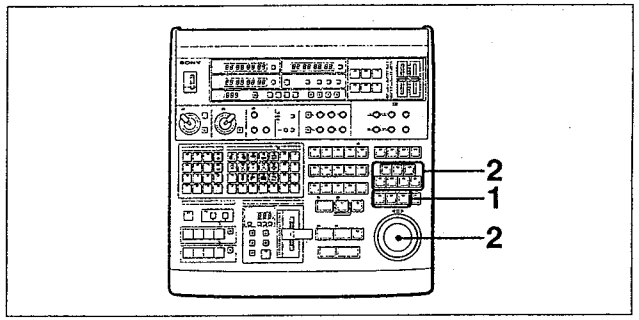
The button lights when you press it, and a '*' mark appears beside the selected VCR in the status display of the main monitor screen.

For details, see "About the Status Display" on page 3-10.

Controlling Tape Transport Manually

When controlling tape transport manually from this unit, you can select two or three VCRs for simultaneous operation. This means that if you connect a monitor to each VCR, you can view playback and search for edit points on up to three VCRs simultaneously. Compared to a system with only one monitor, this configuration eliminates the need to switch back and forth between VCRs to view video output.

For details, see "Monitoring Video and Audio Signals" (page 4-11).



Controlling tape transport manually

1 Select a VCR with a button from the SOURCE section (P1, P2, R-VTR).

2 According to the operation, press one of the buttons in the MANUAL CONTROL section (the button lights), or use the search dial.

- **Using the MANUAL CONTROL buttons**

REC button: Hold down this button and press the PLAY button when you wish to record output signals from the PGM 1/2 OUTPUT connectors without making any edit settings.
This button works only when the R-VTR button in the SOURCE section is lit, and it affects only the recorder.

SPEED, MK-SPD (= SHIFT + SPEED) and DMC buttons: Use these buttons to control VCRs with dynamic tracking capability in Dynamic Motion Control (DMC) mode.

For more information about Dynamic Motion Control, see "Controlling the Speed of Dynamic Tracking (DT) Playback" (page 4-6) and "Editing Variable-Speed Playback — DMC Editing" (page 6-13).

PLAY button: Press to begin playback.

(Continued)

STB OFF (= SHIFT + PLAY) button: Press to put a paused VCR into standby off mode (in order to protect the tape and heads while you take an appreciable break from editing).
STILL button: Press to put a VCR into still picture playback mode.
EJECT (= SHIFT + STILL) button: Press to eject a cassette.
REW button: Press to rewind a tape.
FF button: Press to fast forward a tape.
STOP (= SHIFT + FF) button: Press to stop a VCR.

- **Using the search dial**
  Use the search dial to search for a scene at convenient playback speeds.

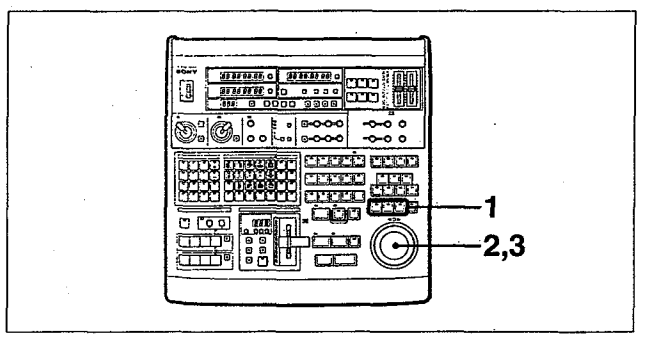
  For details, see "Searching for a Scene With the Search Dial" below.

3 Repeat steps **1** and **2** to control other VCRs. You can control up to three VCRs simultaneously.

Searching for a Scene With the Search Dial

When setting edit points, you can increase your editing efficiency by using the search dial to play back the tape at different speeds.
Each time you press the search dial, it changes from a raised to a depressed position, or the reverse. With the dial in the raised position, you can play back the tape at high speed in the forward or reverse directions (shuttle mode). With the dial in the depressed position, you can play back the tape in frame-by-frame manner in the forward or reverse directions (jog mode).

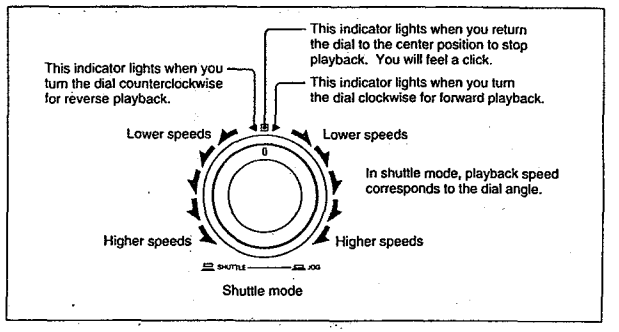
By combining shuttle and jog modes, you can locate scenes on the tape quickly and efficiently.



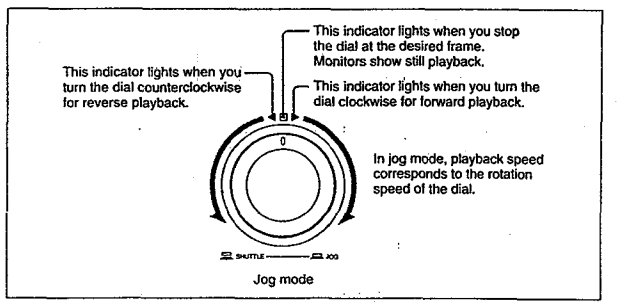
Searching for a scene with the search dial

1 Select a VCR with a button from the SOURCE section (P1, P2, R-VTR).

2 With the search dial in the raised position (shuttle mode), turn the dial clockwise or counterclockwise for high-speed playback. When you find the desired scene, return the dial to the center position to stop playback.



3 Press the search dial down to the depressed position (jog mode), and turn the dial clockwise or counterclockwise to play back the tape frame by frame. When you find the desired frame, stop the dial at that position.



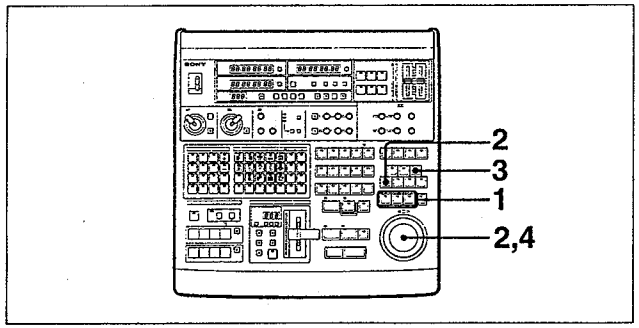
Note

The range of controllable playback speeds may differ in both jog and shuttle modes, depending on the capabilities of the connected VCRs.

1-28

Controlling the Speed of Dynamic Tracking (DT) Playback

This unit supports Dynamic Motion Control (DMC). If your player VCRs support Dynamic Tracking (DT) playback, you can use the search dial to control tape speed for noiseless, variable-speed playback within their DT playback range.



Controlling DT playback speed

1 Select a VCR with a button from the SOURCE section (P1, P2, R-VTR).

2 Rotate the search dial or press the PLAY button in the MANUAL CONTROL section to begin playback.

3 Stop the dial at the scene where you wish to begin DT playback, and press the DMC button in the MANUAL CONTROL section, turning it on.

The selected VCR enters DMC mode.

4 Press the search dial to put it into shuttle mode, and rotate it to control the speed of DT playback.

In DMC mode, tape speed varies between –1 to +3 times normal speed, according to the angle of the dial. However, actual speeds may differ slightly, depending on the capabilities of the connected VCRs.

Selecting Video and Audio Signals

This section is a preliminary introduction to the video switching and audio mixing features of this unit. It explains how to select input and output signals, how to adjust them, and how to monitor program signals on the main and program monitors.

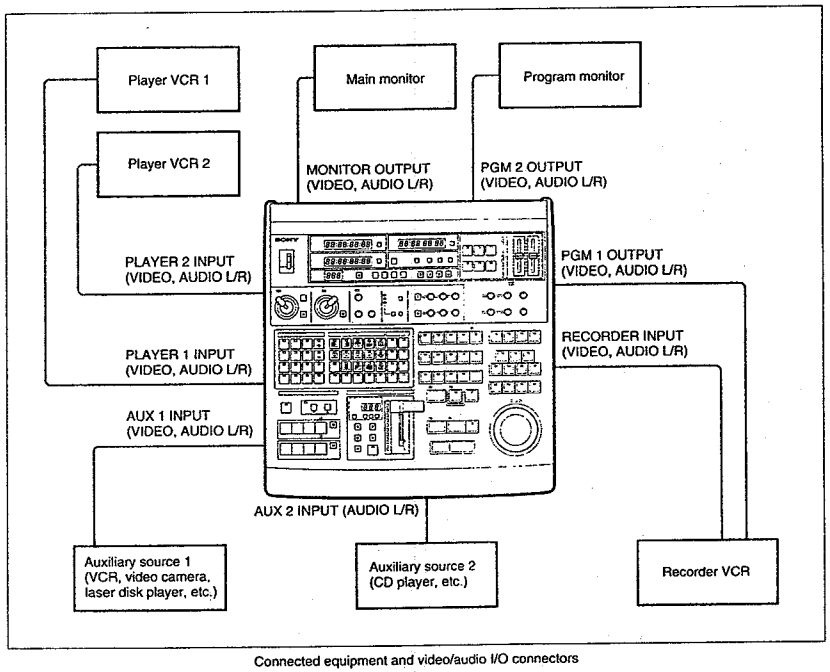
For more information about input and output of audio signals, see "Audio Signal Flow " in the Appendixes (page A-7).

The following explanations assume a system configured as shown below.

Note

Some settings may differ depending on the connected VCRs.

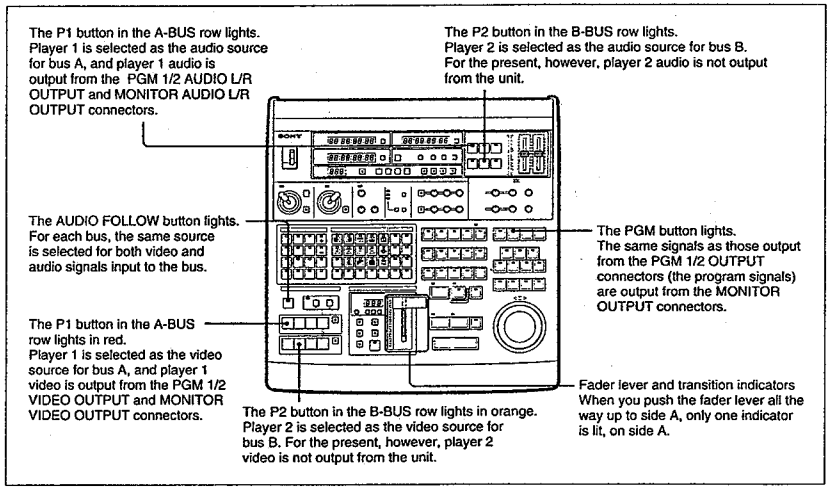
For details, see "Connections" (page 3-3).



Connected equipment and video/audio I/O connectors

Default Input and Output Signals

Turn the unit on, and push the fader lever up all the way toward side A. As soon as you begin playback or shooting with the connected sources, video and audio from player 1 will be output to the recorder, connected to the PGM 1 OUTPUT connector, to the program monitor, connected to the PGM 2 OUTPUT connectors, and to the main monitor, connected to the MONITOR OUTPUT connectors. This is because the unit is automatically initialized as follows when you turn it on, depending on the position of the fader lever.



Default input and output signals

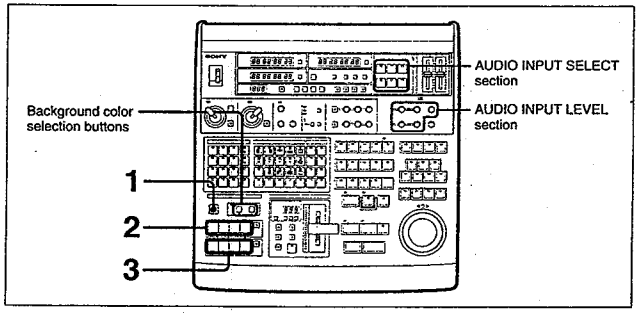
About the colors of input button lights

The meanings of the different colors of the buttons in the A-BUS row and B-BUS row of the VIDEO INPUT SELECT section are as follows.

- When a button **lights in red**, it means that the signal selected with that button is output from the PGM 1/2 OUTPUT connectors.
- When a button **lights in orange**, it means that the signal has been selected for input to the A or B bus, but not for output.
- When two buttons in either the A-BUS row or the B-BUS row **light in red**, it means that the signals selected with those buttons are mixed for output.
- When a button **flashes**, it means that there is no input to the connector selected by that button.
- **About the BKGD buttons**
  The BKGD buttons in the VIDEO INPUT SELECT section select color background output. Note that these buttons take precedence over other buttons in the same row (P1, P2, AUX). Even if the other buttons are lit, the output will be the color background.

Selecting the Same Source for Video and Audio Inputs to a Bus

When the AUDIO FOLLOW button in the VIDEO INPUT SELECT section is lit, an operation which selects a video signal for input to a bus automatically selects the audio signal from the same source.



Selecting audio and video simultaneously

1 If the AUDIO FOLLOW button is not lit, press it turning it on.

2 To select the input signals for bus A, press the desired button in the A-BUS row of the VIDEO INPUT SELECT section so that it lights in red or orange.

For the meaning of the red and orange colors, see "About the colors of input button lights" on page 4-8.

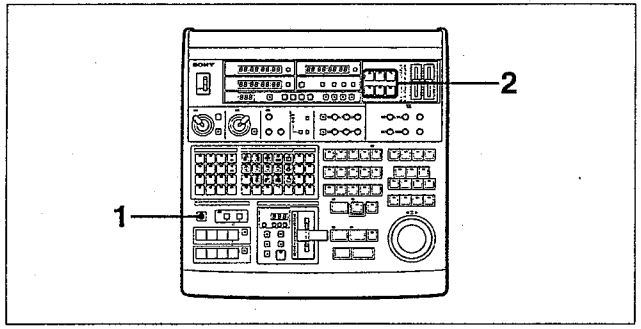
P1 button: Selects player 1 audio and video.
The P1 button in the A-BUS row of the AUDIO INPUT SELECT section lights automatically.
P2 button: Selects player 2 audio and video.
The P2 button in the A-BUS row of the AUDIO INPUT SELECT section lights automatically.
AUX button: Selects auxiliary source 1 audio and video.
The AUX 1 button in the A-BUS row of the AUDIO INPUT SELECT section lights automatically.
BKGD button: Selects a background color generated by the built-in color background generator.
You can select one of 25 colors by pressing the background color selection buttons (▲/▼).

When you press the BKGD button, any other buttons which may have been lit in the A-BUS row of the VIDEO INPUT SELECT section remain lit. However, the selection made with the BKGD button is given priority. Note that the audio signals of the currently selected source are always output, and may be adjusted with the controls in the AUDIO INPUT LEVEL section.
For more information about adjusting the audio level, see "Adjusting Audio Levels" (page 4-16).

3 Proceed in the same way to make selections for bus B, pressing the desired button in the B-BUS row of the VIDEO INPUT SELECT section.

Selecting Different Sources for Video and Audio Inputs to a Bus

You can select video and audio signals from different sources for input to each bus.



Selecting different sources for video and audio inputs to a bus

1 If the AUDIO FOLLOW button in the VIDEO INPUT SELECT section is lit, press it turning it off.

2 Press the desired buttons in the A-BUS and B-BUS rows of the AUDIO INPUT SELECT section, turning them on.

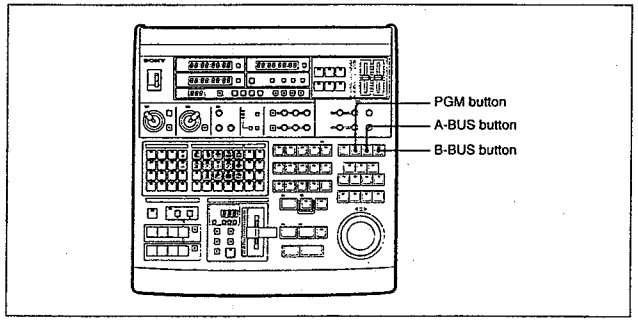
P1 button: Selects audio input from player 1.
P2 button: Selects audio input from player 2.
AUX 1 button: Selects audio input from auxiliary source 1.

Monitoring Video and Audio Signals

You can monitor signals from bus A or bus B on both the program monitor, connected to the PGM 2 OUTPUT connectors, and the main monitor, connected to the MONITOR OUTPUT connectors.
In addition to signals from bus A and bus B, you can monitor signals from any connected source on the main monitor.

Monitoring bus signals on the main monitor

To output signals from bus A to the main monitor, press the A-BUS button in the MONITOR section, turning it on. To output signals from bus B, press the B-BUS button. If you press the PGM button in the MONITOR section, you can output the signals currently being output from the PGM 1/2 OUTPUT connectors to the main monitor.



Monitoring bus signals on the main monitor

Monitoring bus signals on the program monitor

When viewing output signals on the program monitor, you can switch from A-bus signals to B-bus signals, or the reverse.

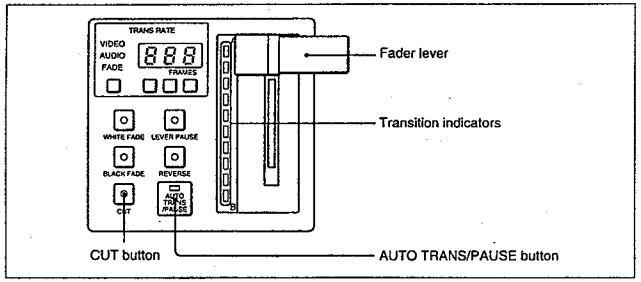
Example: Switching from A-bus signals to B-bus signals

- Press the CUT button in the EFFECT TRANSITION section.
  The output from the PGM 1/2 OUTPUT connectors switches instantly from A-bus signals to B-bus signals.
  The single transition indicator which had been lit on the A side goes out, and a single transition indicator lights on the B side.
  When the CUT button is pressed, the AUTO TRANS/PAUSE button lights automatically, and the unit enters auto transition mode.

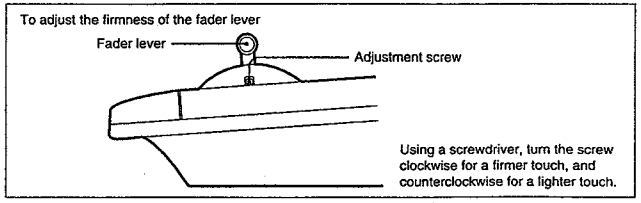
For details about auto transition mode, see "Auto Transition Effects" (page 6-6).

Or

- Pull the fader lever down from the A side to the B side.
  If the NORMAL MIX button in the MIX/EFFECT section is lit, then signals from bus A are mixed with signals from bus B during the time that the fader lever is being pulled from side A to side B. When the fader lever is pulled all the way down to side B, signals are output from bus B only.
  As the transition progresses, the number of lit transition indicators increases, and then decreases to only one when the fader lever is pulled all the way down to the B side.

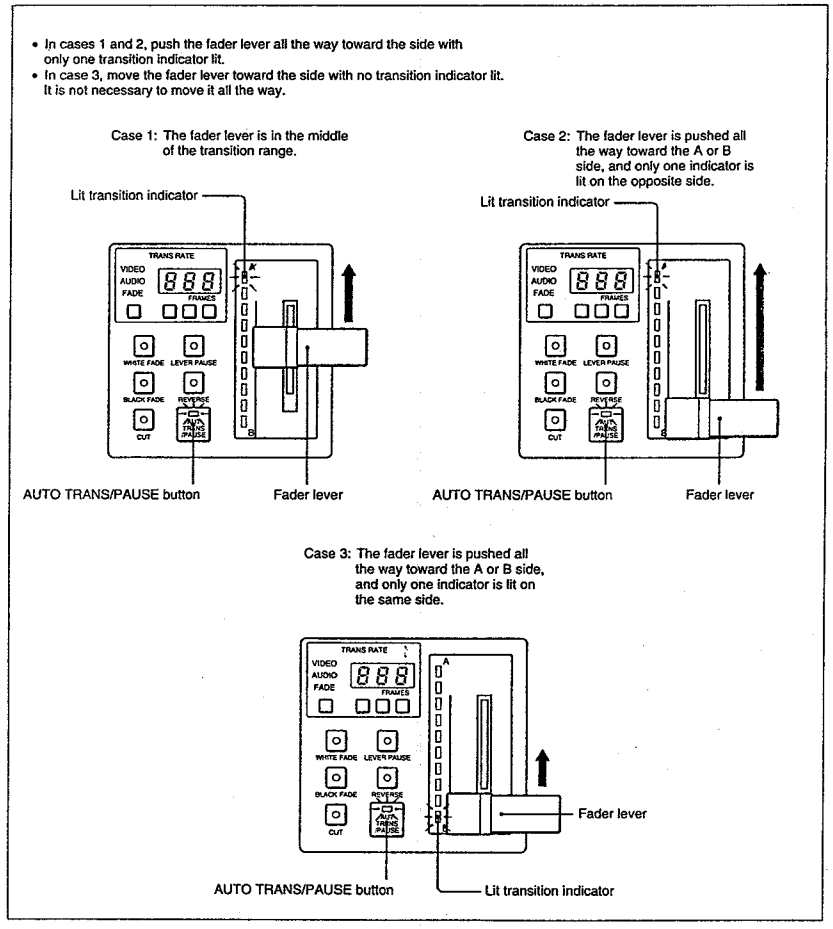


Switching output to the program monitor



Note on the fader lever

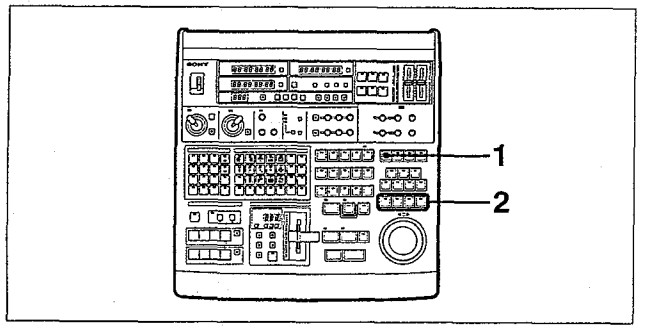
When the AUTO TRANS/PAUSE button is lit, the fader lever is disabled. To use the fader lever, you must extinguish the AUTO TRANS/PAUSE button.
To extinguish the AUTO TRANS/PAUSE button, proceed as follows:



To extinguish the AUTO TRANS/PAUSE button

Monitoring source signals directly

You can output source signals directly to the main monitor without passing through the A bus or the B bus.
Proceed as follows to select source signals for direct output to the main monitor.



Switching source signals for output to the main monitor

1 Press the SOURCE button in the MONITOR section, turning it on.

The PGM button goes out. The video and audio signals which are currently selected by SOURCE section buttons are output to the main monitor.

2 To monitor another source, press the desired SOURCE section button, turning it on.

P1 button: To monitor audio and video input from player 1.
P2 button: To monitor audio and video input from player 2.
R-VTR button: To monitor audio and video input from the recorder.
AUX button: To monitor audio and video input from auxiliary source 1.

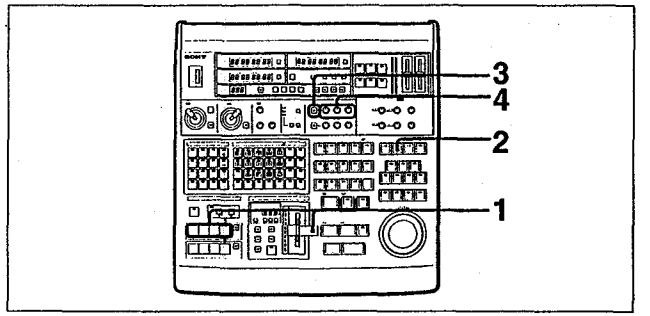
The SOURCE section button which had been lit up to now goes out, and signals from the newly selected source are output to the main monitor.

Adjusting Video and Audio Signals

By adjusting the color characteristics of input video, and adjusting the audio input level, you can output signals to match the effects you desire from the PGM 1/2 OUTPUT connectors.

Adjusting Video Signals

While viewing the monitor, you can adjust the hue (FXE-100) or color subcarrier phase (FXE-100P), luminance, and chrominance of the video output.
The following example shows how to adjust A-bus video output signals while viewing the monitor.



Adjusting video signals

1 Push the fader lever up to the A side, and select the signals you want to adjust with the selection buttons in the A-BUS row of the VIDEO INPUT SELECT section.

2 Press the PGM button in the MONITOR section.

The signals selected in step **1** are output to the main monitor.

3 Press the A-BUS button in the VIDEO LEVEL & HUE (FXE-100) or VIDEO LEVEL & CHROMA PHASE (FXE-100P) section.

The HUE (FXE-100) or CHROMA PHASE (FXE-100P), LUMINANCE and CHROMINANCE knobs to the right of the button are enabled.

4 While viewing the main monitor, rotate the knobs to adjust the video.

HUE knob (FXE-100): Adjusts the hue.
CHROMA PHASE knob (FXE-100P): Adjusts the color subcarrier phase.
LUMINANCE knob: Adjusts the brightness.
CHROMINANCE knob: Adjusts the saturation.

Note for FXE-100P

When adjusting the color subcarrier phase, use a vectorscope to measure the adjustments.

If you want to adjust the white balance, use the COLOR CORRECTION joystick.

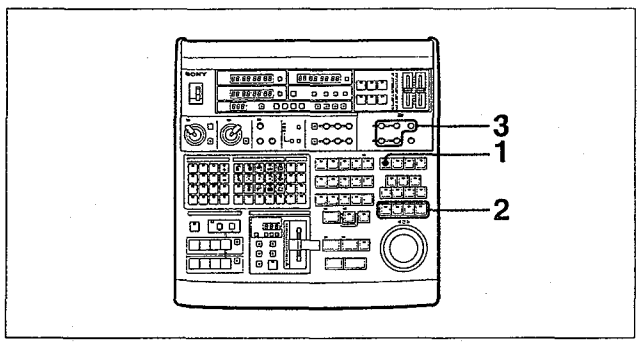
For details, see "Color correction" (page 5-51).

Adjusting Audio Levels

This section will explain how to adjust audio input and output levels.

Adjusting the audio input level

To adjust the audio input level from VCRs or auxiliary source 1, proceed as follows.



Adjusting the audio input level from VCRs or auxiliary source 1

1 Press the SOURCE button in the MONITOR section, turning it on.

2 Select the audio source by pressing one of the buttons (P1, P2, R-VTR, AUX) in the SOURCE section.

P1 button: Player 1
P2 button: Player 2
R-VTR button: Recorder
AUX button: Auxiliary source 1

3 Adjust using the knobs in the AUDIO INPUT LEVEL section, while monitoring the audio level meters in the audio mixer section.

P1 MAIN, P2 MAIN knobs: Player 1 and player 2 main audio level.
P1 SUB, P2 SUB knobs: Player 1 and player 2 secondary audio level.
AUX 1 knob: Auxiliary input 1 audio level.

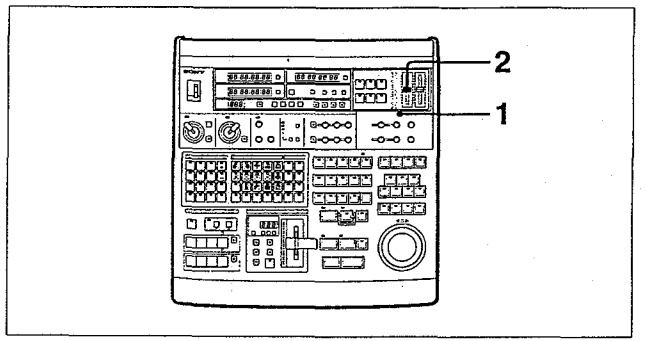
Note

The left (L) and right (R) channels are adjusted together. They cannot be adjusted separately.

Adjusting audio input from microphones and auxiliary source 2

Regardless of the position of the fader lever (and the number of lit transition indicators), you can mix narration and background music from a microphone or auxiliary source at the desired level with the audio of bus A or bus B, for output from the PGM 1/2 AUDIO L/R OUTPUT connectors.

To adjust the level of audio input from the microphone or auxiliary source 2, proceed as follows.



Adjusting the level of audio input from microphones and auxiliary source 2

1 Using the AUX 2/MIC switch in the audio mixer section, select the audio signal which you wish to adjust.

AUX 2: Adjust the level of audio input from auxiliary source 2.
MIC: Adjust the level of audio input from the microphone.

2 Move the AUX 2/MIC fader to adjust the audio input level.

The further up the fader is, the higher the audio level.

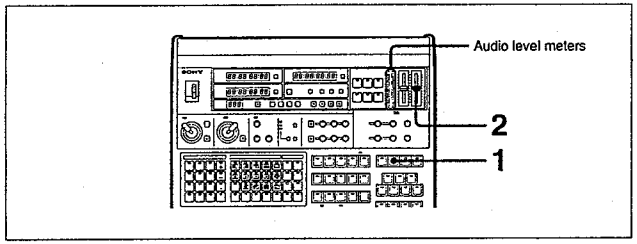
Notes

- The left (L) and right (R) auxiliary source levels are adjusted together. They cannot be adjusted separately.
- Microphone input is monaural.

For more information about the flow of audio signals see page A-7.

Adjusting audio output levels

To adjust the level of all output from the PGM 1/2 AUDIO L/R OUTPUT connectors



Adjusting the level of all output from the PGM 1/2 AUDIO L/R OUTPUT connectors

1 Press the PGM button in the MONITOR section, lighting it, to select program signals for output to the main monitor.

2 While monitoring the level meters in the audio mixer section, move the MASTER fader to adjust the level.

The further up the fader is, the higher the audio level.

Note

The left (L) and right (R) channels are adjusted together. They cannot be adjusted separately.

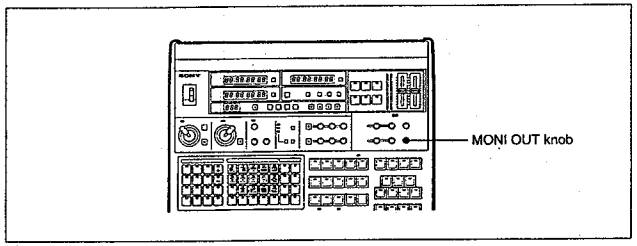
For more information about the flow of audio signals see page A-7.

To adjust the level of output from the MONITOR AUDIO L/R OUTPUT connectors

Rotate the MONI OUT knob in the AUDIO INPUT LEVEL section clockwise to increase the level, and counterclockwise to decrease it.

Note

The left (L) and right (R) auxiliary source levels are adjusted together. They cannot be adjusted separately.

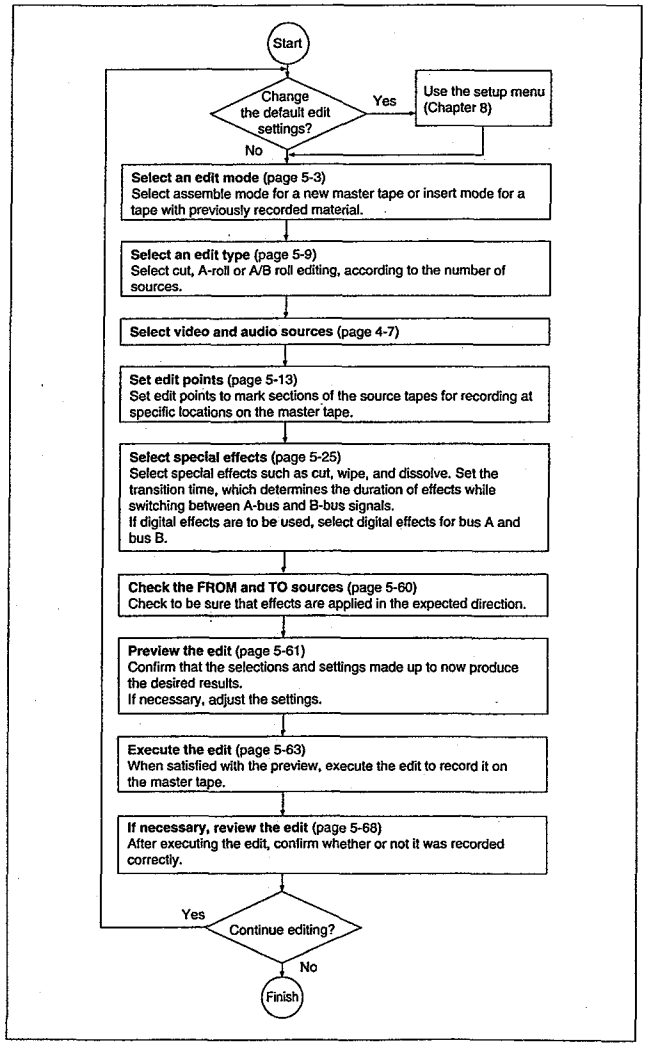


Adjusting the level of output from the MONITOR AUDIO L/R OUTPUT connectors

For more information about the flow of audio signals see page A-7.

Common Editing Procedures

The following is a flowchart of basic operations which are common to every editing session. See the page numbers in parentheses for detailed descriptions of each operation.



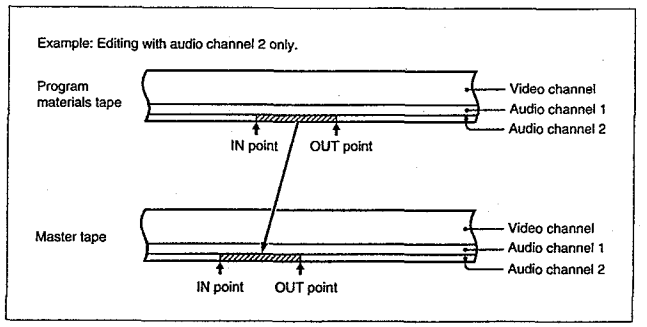
Flowchart of a typical editing session

Selecting an Edit Mode

This section describes the unit's edit modes and explains when to select them.

Insert Mode

Select insert mode when you want to insert program material at specific points on a previously recorded tape. You can insert video and audio simultaneously, video only, or audio only. You can also specify channel 1 audio, channel 2 audio, or both. Unlike assemble mode editing, insert mode editing does not affect sections of the tape beyond the recorder OUT point, because the unit switches from recording mode to playback mode as soon as the OUT point is reached.
Insert mode is selected by default when you turn the unit on.



Insert mode editing

Select insert mode when you wish to:
- record video and audio over unneeded sections of a previously recorded tape.
- insert music and narration into a tape containing an edited video program.
- insert video into a tape containing an edited audio program.

Note

Tapes with nothing at all recorded on them cannot be used as master tapes in insert mode editing. Normally, master tapes should be prepared by recording black burst signals in advance.

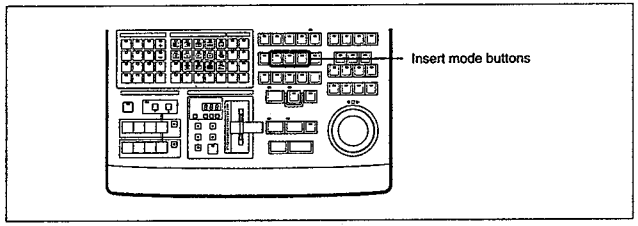
For details, refer to the handbook supplied with this unit.

Selecting insert mode

Select the channel(s) to edit by pressing the insert mode buttons (V, A1, A2) in the EDIT MODE section of the control panel, turning them on.

V button: Edit the video channel.
A1 button: Edit audio channel 1.
A2 button: Edit audio channel 2.

You can press several buttons to edit multiple channels.



Selecting insert mode channels

To cancel a channel selection

Press the corresponding insert mode button, turning it off.

To exit insert mode

Press all of the lit insert mode buttons.
When you press the last lit button, instead of going off it begins to flash, along with the other two insert mode buttons. The ASMBL button also begins to flash. This means that no edit mode is currently selected.

Time code insert mode

Use this mode to add time code to tapes with previously recorded audio or video.

For details, see "Recording Time Code — Time Code Insert" (page 6-22).

Split mode

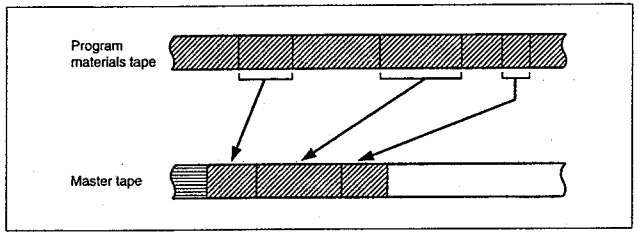
You can set independent IN points for audio and video.

For details, see "Settting Independent Video and Audio IN Points — Split Editing" (page 6-8).

Assemble Mode and First Edit Mode

Assemble mode

Select assemble mode when you want to record sequentially from the start of a master tape. Video and audio are recorded on the master tape together with control and time code signals. If time code signals have already been recorded on the master tape, then the newly recorded time code signals will be recorded in sequence with the existing signals.
Assemble mode is convenient when using a new tape as the master tape.



Assemble mode editing

Notes on assemble mode editing

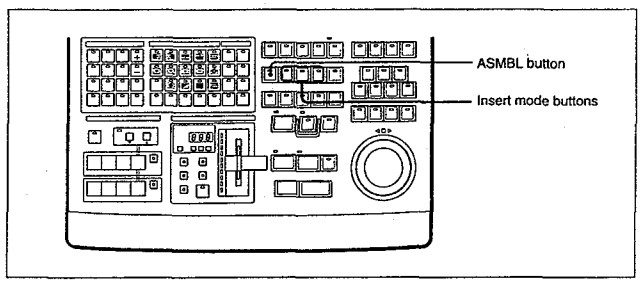
- When an assemble edit is executed for the first time on a master tape, the unit expects to find CTL signals recorded on the tape from the preroll point or earlier up to and including the IN point. If CTL signals have not yet been recorded on the tape, execute a first edit before selecting assemble mode.

  For details, see "First edit mode" (page 5-7).

- If you begin an assemble edit at a point midway though an already recorded tape, signals will be erased across the entire width of the tape for about two seconds after the recorder's OUT point. Both video and audio signals recorded in this two-second section will be lost. If you wish to avoid this, select insert mode instead of assemble mode.

Selecting assemble mode

Press the ASMBL button in the EDIT MODE section of the control panel, turning it on.
If any insert mode buttons (V, A1, A2) are lit, press them to turn them off before pressing the ASMBL button.



Selecting assemble mode

To exit assemble mode

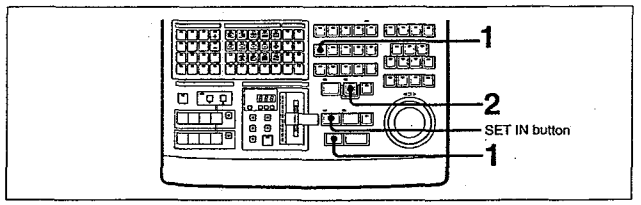
Press the ASMBL button, turning it off, or press one of the insert mode buttons (V, A1, A2), turning it on.

First edit mode

If there is nothing at all recorded on the master tape, you will be unable to execute even an assemble edit. This is because the unit needs to find control signals on the master tape, at least around the edit IN point, in order to synchronize the tapes.
When using a blank tape for the first time, select first edit mode to perform an initializing assemble edit. Black burst signals, CTL signals, and time codes will be recorded for about twelve seconds plus the preroll time from the beginning of the tape.
After executing a first edit, the unit automatically enters assemble mode.

Executing a first edit

Proceed as follows to execute a first edit.



Editing in first edit mode

1 In the EDIT MODE section, press the 1ST EDIT (=SHIFT+ASMBL) button after verifying that:
- the ASMBL button is lit, or
- the ASMBL button and insert mode buttons (V, A1, A2) are flashing.

If any insert mode buttons are lit, press to turn them off, until they begin flashing together with the ASMBL button.
When you press the 1ST EDIT (=SHIFT + ASMBL) button, it begins flashing more rapidly than normal.

2 Press the AUTO EDIT/END button in the AUTO CONTROL section.
The recorder begins to run. Black burst signals, CTL signals, and time code signals are recorded as follows from the beginning of the tape to just beyond the IN point, a length sufficient for synchronization.
- **Before the IN point:** 10 seconds, plus the preroll time selected under setup menu item 102 PREROLL TIME.
  For details, see Chapter 8.
- **After the IN point:** 2 seconds

To set an IN point time code other than 00:00:00:00

After step 1, press the MARK IN button in the TIME MARK section, or press the SET IN (=SHIFT + MARK IN) button and enter the desired time code with the numeric keypad.

For details, see "Setting edit points with the numeric keypad" (page 5-15).

About time code and control signals

Under setup menu item 104 EDIT REFERENCE, you can specify whether time code or CTL signals shall be used as tape positioning information. The unit is factory preset to use longitudinal time code (LTC, time code recorded along the length of the tape).

Notes

- With the FXE-100, time code is recorded in non-drop frame mode when setup menu item 110 FRAME CONTROL MODE is set to AUTO.
  Note that this menu item is not incorporated in the FXE-100P.
- The data selected under setup menu item 105 USER BITS is recorded in time code user bits.

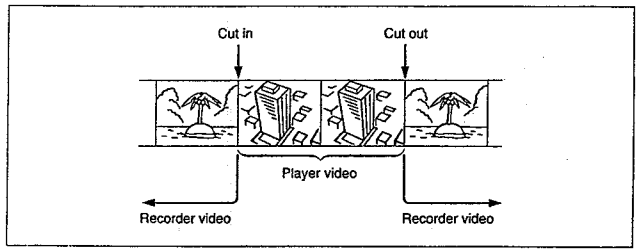
For details, see Chapter 8.

Selecting an Edit Type

Depending upon whether you are using one or two players, select the type of insert or assemble edit.

Cut Editing

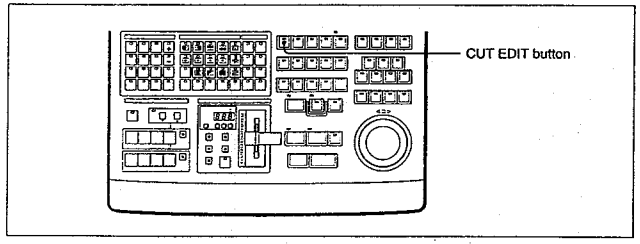
Cut editing is editing with one player, with instantaneous cuts between player and recorder signals at the recorder IN and OUT points.



Cut editing

To select cut editing

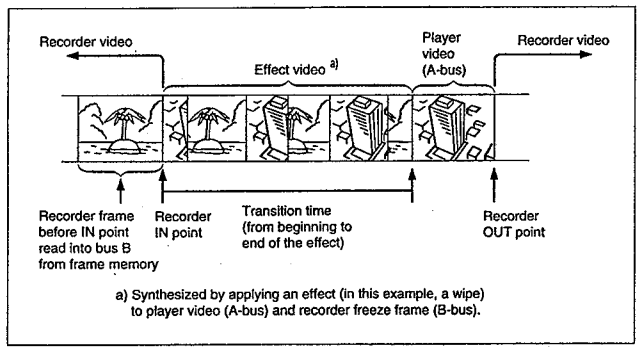
Press the CUT EDIT button in the EDIT TYPE section, turning it on.



To select cut editing

A-Roll Editing

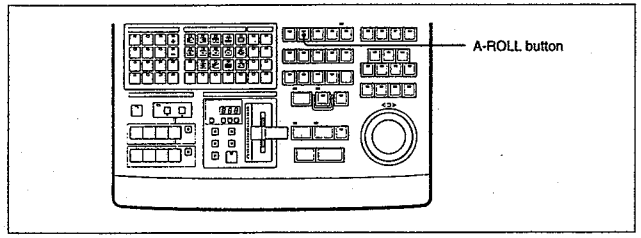
A-roll editing is like cut editing in that it uses only one player. In A-roll editing, however, the playback frame before the recorder IN point is read into bus B, making it possible to use the two signals (A-bus and B-bus) in effects such as wipes and dissolves.



A-roll editing

To select A-roll editing

Press the A-ROLL button in the EDIT TYPE section, turning it on.



To select A-roll editing

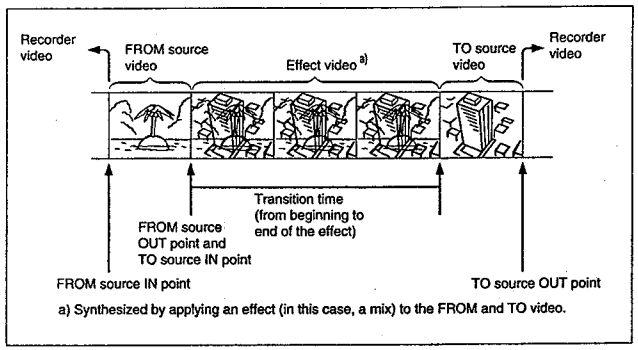
Note

The following restrictions apply in A-roll editing.

- In order to read signals from the recorder into bus B, the player source must always be selected by pressing a button in the A-BUS row of the VIDEO INPUT SELECT section.
- If the BKGD button in the B-BUS row is lit, video signals from the recorder cannot be read into bus B, meaning that the effect will use video signals from bus A and a background color from bus B. If the BKGD button is lit, press it to turn it off.

A/B Roll Editing

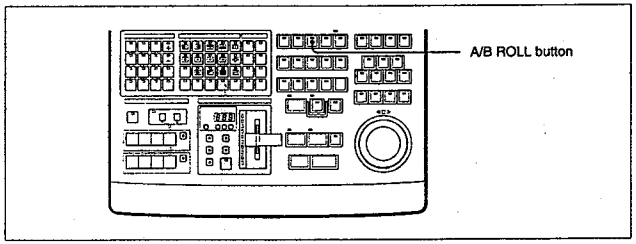
A/B roll editing allows you to record while applying effects such as wipes and dissolves to the playback of two players. The player supplying the signals which appear before the transition is called the FROM source, and the player supplying the signals which appear after the transition is called the TO source.



A/B roll editing

To select A/B roll editing

Press the A/B ROLL button in the EDIT TYPE section, turning it on.



To select A/B roll editing

Note

This unit also allows a single player to be used to switch from A-bus signals to B-bus signals. In this case too, A/B roll edit should be selected as the edit type by pressing the A/B ROLL button.

For details, refer to "Applying Digital Effects to Input Signals While Switching Between Two Scenes With One Player" in the FXE-100 handbook.

Manual Effects and Sync Roll Editing

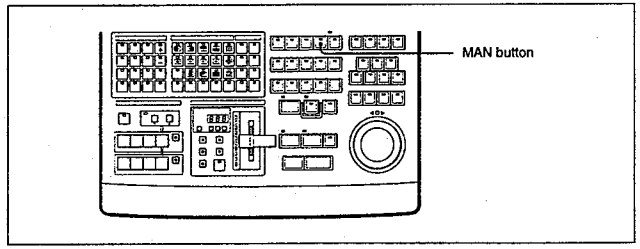
Editing with manual effects

While running two players, you can operate the controls for manual effects at the desired scene. The effects are recorded on tape but not registered in the edit decision list (EDL).

For more information about the EDL, see Chapter 7.

To select manual effect editing

Press the MAN button in the EDIT TYPE section, turning it on.



To select manual effect editing

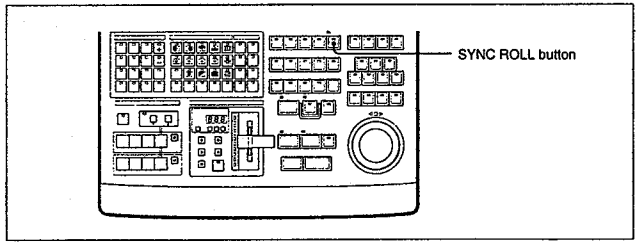
For more information about manual effects, see "Editing With Manual Special Effects" (page 6-4).

Sync roll editing

Sync roll editing is similar to manual editing, except that the effects are registered in the edit decision list. While running two players, operate the controls to achieve the desired effect at the desired scene.

To select sync roll editing

Press the SYNC ROLL button in the EDIT TYPE section, turning it on.



To select sync roll editing

For more information about sync roll editing, see page 6-2.

Setting Edit Points

This section will explain how to set and modify edit points.

Setting Edit Points

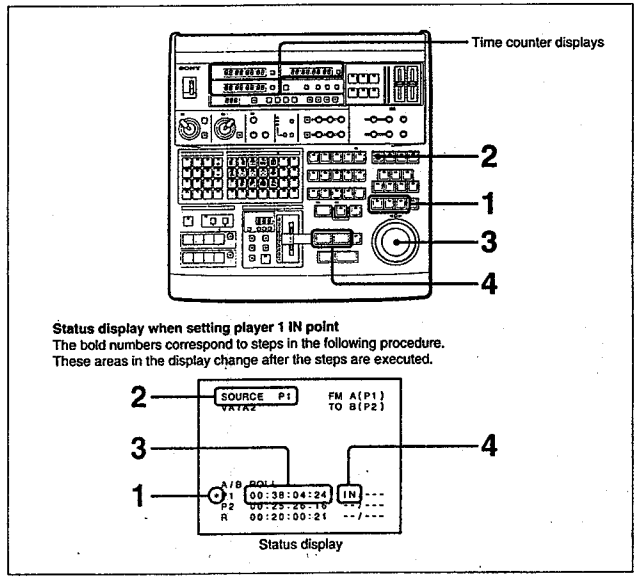
There are two ways to set an edit point:

- Search for the desired frame while viewing playback on the monitor, and then operate the controls to store the time code for that frame in the unit's memory.
- Enter the edit point data manually using the numeric keypad.

Setting edit points while viewing playback

Proceed as follows to set edit points while viewing playback on the main monitor. If the ON indicator in the SCREEN section is lit, a status display in the main monitor will be updated as you carry out each step.

For details, see "About the Status Display" (page 3-10).



Setting edit points while viewing playback

1 Select a VCR by pressing a button in the SOURCE section.
P1 button: Player 1
P2 button: Player 2
R-VTR button: Recorder

- The source button lights. The IN and OUT indicators next to the time counter display for that VCR begin to flash.
- If you have already set an IN point, the IN indicator will be lit. If you have already set an OUT point, the OUT indicator will be lit. In this case, you can update the edit points by executing steps **2**, **3** and **4**.

Status display
Shows * in front of the selected VCR.

2 Press the SOURCE button in the MONITOR section.
The button lights, and playback from the VCR selected in step **1** appears in the main monitor. You can skip this step if you have connected a monitor for each VCR.

Status display
Shows "SOURCE" in the monitor signal area, followed by the name of the selected VCR.

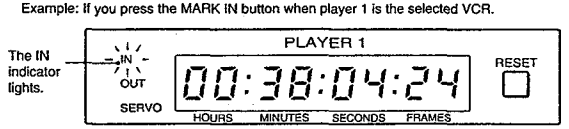
3 While viewing the main monitor, rotate the search dial until you find the desired frame, then stop the dial.
Time code data recorded on the tape for that frame appears in the time counter display.

For details, see "Searching for a Scene With the Search Dial" (page 4-4).

Status display
Shows the selected VCR's current tape position in the time code area.

4 Press the MARK IN or MARK OUT button in the TIME MARK section.
MARK IN: The time code in the time counter display is set as the IN point. The IN indicator stops flashing and lights.
MARK OUT: The time code in the time counter display is set as the OUT point. The OUT indicator stops flashing and lights.

Example: If you press the MARK IN button when player 1 is the selected VCR.



Status display
Shows "IN/–:––" in the time code area.

Note

If the VCRs are not connected correctly, or if the unit was unable to read time code information, an error code will appear in the time counter display.

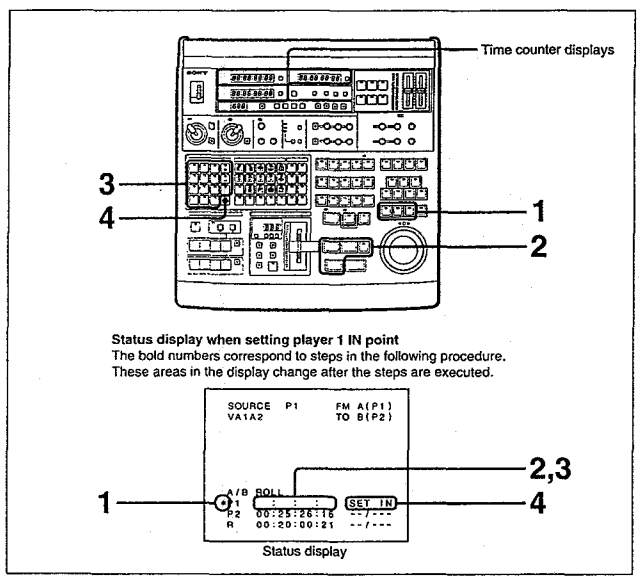
For details, see "Error Messages" in the Appendixes (page A-2).

5 Repeat steps **1** through step **4** to set the remaining edit points for each VCR.

To restore the original edit points after modifying them
Press the LAST X (=SHIFT + DUR) button in the AUTO CONTROL section.

Setting edit points with the numeric keypad

If you already know the time codes for the frames you want to set, you can enter the codes manually using the numeric keypad. Enter two out of the following three: time codes for the IN and OUT edit points, and the duration.



Setting edit points with the numeric keypad

1 Select a VCR by pressing a button (P1, P2 or R-VTR) in the SOURCE section.

- The source button lights. The IN and OUT indicators next to the time counter display for that VCR begin to flash.
- If you have already set an IN point, the IN indicator will be lit. If you have already set an OUT point, the OUT indicator will be lit. In this case, you can update the edit points by executing steps **2**, **3** and **4**.

Status display
Shows * in front of the selected VCR.

2 In the TIME MARK section, press the SET IN (=SHIFT + MARK IN) button, the SET OUT (=SHIFT + MARK OUT) button, or the SET DUR button. The units enters numeric keypad mode and all of the numeric keys light.

SET IN (=SHIFT + MARK IN): Press this button to set an IN point. The SET IN indicator lights.
SET OUT (=SHIFT + MARK OUT): Press this button to set an OUT point. The SET OUT indicator lights.
SET DUR: Press this button to set the duration. The SET DUR button lights.

Status display
Shows " : : : " in the time code area for the selected VCR, and "SET IN", "SET OUT" or "SET DUR" in the time code data type area.

3 Using the numeric keypad, enter the time code of an IN or OUT point, or the duration (up to eight digits).

Note

The most significant digits are automatically initialized to '0', so you don't need to enter all eight digits. For example, to enter the data "00 hours, 00 minutes, 35 seconds, 24 frames" you can skip the 0000 representing hours and minutes and enter only 3524.

Status display
The number is displayed as you enter it in the selected VCR's time code area.

4 Press the ENT key in the numeric keypad section.
The IN point, OUT point or duration data entered in step **3** is confirmed. For an IN point, the IN indicator next to the time counter lights. For an OUT point, the OUT indicator lights. For a duration, both the IN and OUT indicators light. As soon as you press the ENT key, the unit leaves numeric keypad mode.

Status display
The time code data type area changes as follows.
- "SET IN" → "IN/– – –".
- "SET OUT" → "– –/OUT".
- "SET DUR" → "IN/OUT" (if an IN or OUT point has been set)
  → "– –/– – –" (if no IN or OUT point has been set)

5 Repeat steps **1** through step **4** to set the remaining edit points for each VCR.

To specify a duration for auxiliary source 1
In step **1**, press the AUX button in the SOURCE section, and in step **2** press the SET DUR button.

Notes

- When you press the AUX button, "R-VTR" in the bottom line of the status display changes to "AUX".
- IN points are set automatically for auxiliary source 1.
- The SET IN (=SHIFT + MARK IN) and SET OUT (=SHIFT + MARK OUT) buttons have no effect for auxiliary source 1.

Using special keys in the numeric keypad
00 key: Allows you to enter two zeros at once.
BS key: Erases the digit currently displayed in the last column of the time counter display.
CLR key: Erases all of the digits displayed in the time counter display.

To exit numeric keypad mode immediately
Press the CLEAR button in the AUTO CONTROL section.

To restore the original data
Press the LAST X (=SHIFT + DUR) button in the AUTO CONTROL section.

Relation Between IN/OUT Points and Duration

As soon as you enter two out of the three values (IN point, OUT point, and duration), the unit automatically calculates the third.
When you change one of the values, the other two are adjusted according to the following precedence table. Items with higher numbers have lower precedence, and are the first to be adjusted.

1. Manually set IN point
2. Manually set OUT point
3. Manually or automatically set duration
4. Automatically set IN point
5. Automatically set OUT point

For example, when IN and OUT points have been set manually, and the duration is incremented by three frames using the SET DUR button and the numeric keypad, the OUT point is automatically incremented by three frames while the IN point remains unchanged.

IN point	00:01:02:03 (manual)	Duration increased by three frames →	00:01:02:03 (no change)
OUT point	00:01:04:03 (manual)		00:01:04:06 (automatic)
Duration	00:00:02:00 (automatic)		00:00:02:03 (manual)

The IN point remains unchanged, but the OUT point is automatically incremented by three frames.

Note

A period (.) appears after "IN", "OUT" or "DUR" in the status display to indicate that edit time data has been calculated automatically. This can be verified at any time by selecting a VCR and pressing the IN, OUT or DUR button to display the time data.

Relation between IN/OUT points and duration in DMC editing

When the tape is running at normal speed, the duration is equal to the OUT point minus the IN point. In DMC editing, however, this relationship does not hold unless the DMC initial speed (the speed of DT playback at the IN point) is set to +1 times normal speed.

Example 1: If a duration of 2 seconds is set manually when DMC initial speed is +1/2 (+50%) times normal speed.		
IN point	00:01:02:03	Set manually
OUT point	00:01:03:03	Calculated value = IN point + 2 seconds × 1/2 normal speed
Duration	00:00:02:30	Set manually

Example 2: If an OUT point is set manually at a point 2 seconds beyond the IN point when DMC initial speed is +1/2 (+50%) times normal speed.		
IN point	00:01:02:03	Set manually
OUT point	00:01:04:03	Set manually
Duration	00:00:04:00	Calculated value = 2 seconds ÷ 1/2 normal speed

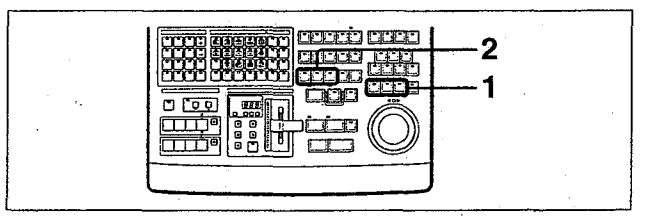
Checking, Cuing Up, Changing and Deleting Edit Points

This section explains how to check edit points, and how to change them after a preview.

For information about how to change or check edit points which have been registered in the EDL, see Chapter 7.

Checking edit points

Proceed as follows to check edit points and durations.



Checking edit point data

1 Select a VCR by pressing the appropriate button (P1. P2 or R-VTR) in the SOURCE section.

2 Depending upon the type of data you want to check, press the IN button, the OUT button or the DUR button in the AUTO CONTROL section, turning it on.

- If you pressed the IN or OUT button, the IN or OUT indicator next to the time counter display for the selected VCR lights. If you pressed the DUR button, both the IN and OUT indicators light. The edit point or duration is displayed on the main monitor and in the corresponding time counter display.

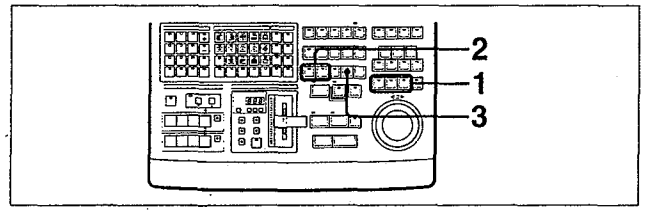
Note

A period (.) appears after "IN", "OUT" or "DUR" in the status display to indicate that edit time data has been calculated automatically. This can be verified at any time by selecting a VCR and pressing the IN, OUT or DUR button to display the time data.

- If an IN or OUT point has not yet been set, the corresponding indicator begins to flash and the time counter display shows "––:––:––:––".

Cuing up the tape to an edit point

You can view the scene which appears at a given edit point by cuing up the tape to that point. Proceed as follows.



Cuing up an edit point

1 Select a VCR by pressing the appropriate button (P1, P2 or R-VTR) in the SOURCE section.

2 To cue up an IN point, press the IN button in the AUTO CONTROL section, turning it on. To cue up an OUT point, press the OUT button.

The time code for the specified edit point appears in the main monitor status display and in the time counter display for that VCR.

3 Press the GO TO button in the AUTO CONTROL section, turning it on. The tape is cued up to the specified point for the specified VCR. Monitors display still playback. "GO TO" appears in the main monitor status display.

4 Repeat steps **1** to **3** to cue up edit points for other VCRs.

If you press the GO TO button without pressing the IN or OUT button
The tape is cued up to the IN point.

Changing edit points

There are two ways to change an already set edit point.

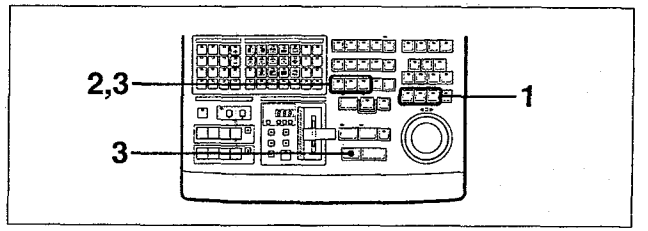
- Set the edit point again.

  For details, see "Setting Edit Points" (page 5-13).

- Trim the edit point data.

Proceed as follows to trim edit point data.

Using the TRIM+ and TRIM– buttons in the AUTO CONTROL section



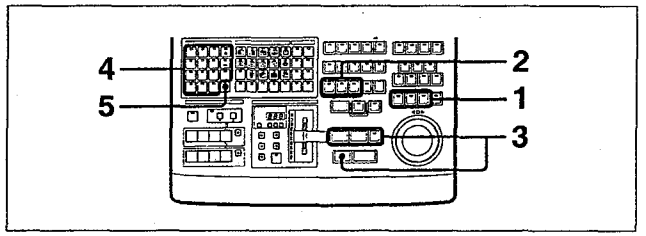
Trimming edit points with the TRIM+ and TRIM– buttons

1 Select a VCR by pressing the appropriate button in the SOURCE section.

2 Press the IN, OUT, or DUR button in the AUTO CONTROL section to display the value you want to change in the corresponding time counter display.

3 In the AUTO CONTROL section, press the TRIM+ (=SHIFT + IN) button, or the TRIM– (=SHIFT + OUT) button.
TRIM+ (=SHIFT + IN): Each time you press the button, the value increases by one frame.
TRIM– (=SHIFT + OUT): Each time you press the button, the value decreases by one frame.

Trimming edit points with the numeric keypad



Trimming edit points with the numeric keypad

1 Select a VCR by pressing the appropriate button in the SOURCE section.

2 Press the IN, OUT, or DUR button in the AUTO CONTROL section to display the value you want to change in the corresponding time counter display.

3 Depending upon the type of data, press the SET IN (=SHIFT + MARK IN) button, the SET OUT (=SHIFT + MARK OUT) button, or the SET DUR button in the TIME MARK section, putting the unit into numeric keypad mode.

SET IN (=SHIFT + MARK IN): To change IN point data. The SET IN indicator lights.
SET OUT (=SHIFT + MARK OUT): To change OUT point data. The SET OUT indicator lights.
SET DUR: To change the duration. The SET DUR button lights.

4 To increment the data, press the '+' key in the numeric keypad, or press the '–' key to decrement it. Then use the numeric keys to input the desired value (in frames).

Note

You can also enter the value before incrementing or decrementing it with the '+' and '–' keys.

5 Press the ENT key.
The changed data is confirmed, and the unit leaves numeric keypad mode.

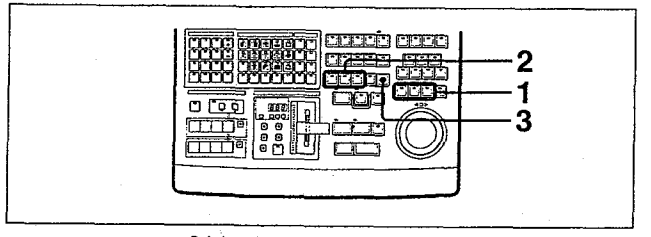
To return changed edit points to their original values

Press the LAST X (=SHIFT + DUR) button in the AUTO CONTROL section.

Deleting edit points

There are two ways to delete edit points.
- Press the CLEAR button in the AUTO CONTROL section.
- Use the numeric keypad.

Deleting edit points with the CLEAR button



Deleting edit points with the CLEAR button

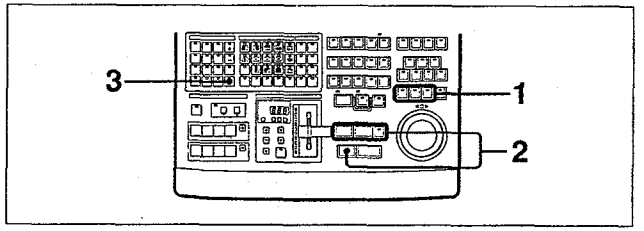
1 Select a VCR by pressing the appropriate button in the SOURCE section.

2 Press the IN, OUT, or DUR button in the AUTO CONTROL section to display the value you want to delete in the corresponding time counter display.

3 Press the CLEAR button in the AUTO CONTROL section.
The data is deleted. The IN or OUT indicator in the time counter display panel begins to flash, and "– – : – – : – – : – –" is displayed in the time counter display.

1-46

Deleting edit points with the numeric keypad



Deleting edit points with the numeric keys

1 Select a VCR by pressing the appropriate button in the SOURCE section.

2 In the TIME MARK section, press the SET IN (=SHIFT + MARK IN) button, the SET OUT (=SHIFT + MARK OUT) button, or the SET DUR button, putting the unit into numeric keypad mode.

SET IN (=SHIFT + MARK IN): To delete an IN point. The SET IN indicator lights.
SET OUT (=SHIFT + MARK OUT): To delete an OUT point. The SET OUT indicator lights.
SET DUR: To delete the duration. The SET DUR button lights.

3 Without entering any numeric data, press the ENT button in the numeric keypad.
The data is deleted. The IN or OUT indicator in the appropriate time counter display panel begins to flash, and "– – : – – : – – : – –" is displayed in the time counter display.

To restore a deleted edit point

Press the LAST X (=SHIFT + DUR) button in the AUTO CONTROL section.

Selecting Special Effects

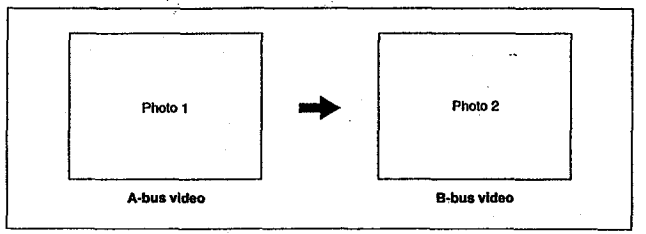
You can choose from among four kinds of special effects to switch between or combine two video signals: cut, dissolve, wipe, and key.

This section will describe how to select and combine these effects. Note that the descriptions assume that transitions begin with the fader lever, AUDIO FOLLOW button and transition indicators in the following state.

Fader lever: Pushed all the way toward side A.
AUDIO FOLLOW button: Lit
Transistion indicators: Topmost indicator on side A is lit, and all others are off.

Cut

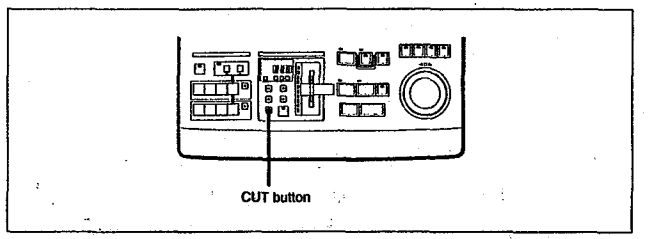
Cut is an effect which switches instantly between two video signals.
If there are audio inputs to the buses, they are cut in synchronization with the video signals.



Cut

Executing the cut effect

To excute a cut, wait for the desired scene and then press the CUT button in the EFFECT TRANSITION section. The cut takes place immediately.



Executing a cut

Notes

- When using effects such as wipe and dissolve, you can still get a cut effect by pressing the CUT button. The cut takes place as as soon as you press the button.
- In A/B roll editing, set the transition time to 0.

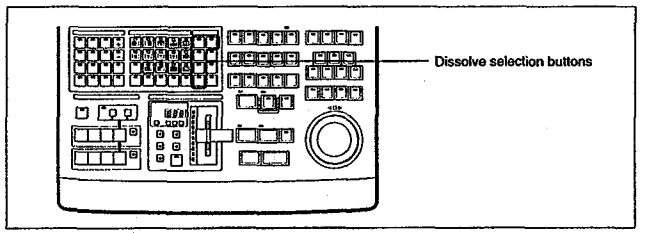
For details, see "Setting the Transition Time" (page 5-58).

Dissolve

Dissolve (or mix) is a cross-fade effect which fade outs A-bus video while fading in B-bus video. Midway through the transition, video signals from both buses overlap.
If there are audio inputs to the buses, they are cross-faded in synchronization with the video cross-fade.

Selecting a dissolve effect

Press one of the NORMAL MIX, MOSAIC MIX, POSTRZ MIX, B&W MIX and LUMINA CLIP TRANS buttons in the MIX/EFFECT section.



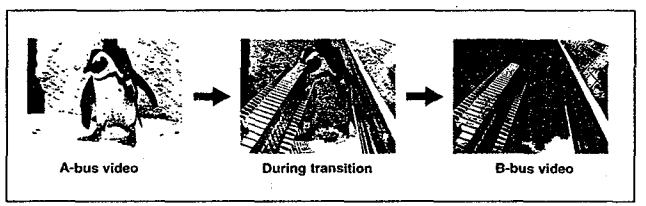
Selecting a dissolve effect

Dissolve types

The types of effect selectable with the dissolve selection buttons are as follows.

NORMAL MIX button

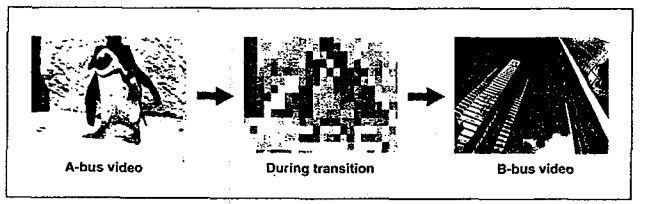
This button selects a standard dissolve effect.



NORMAL MIX dissolve

MOSAIC MIX button

A mosaic pattern appears during the transition.



MOSAIC MIX dissolve

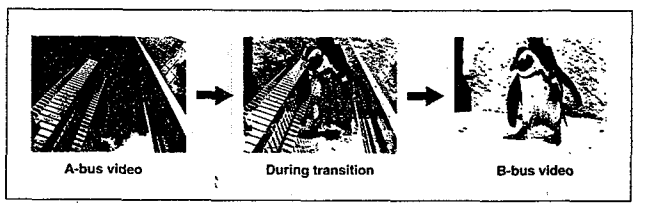
To cancel a mosaic mix, press the NORMAL MIX button.

Note

Mosaic mix cannot be combined with the following input effects.
- Multi-screen (MULTI) (*page 5-47*)
- Multi-screen 2 (MULTI 2) (*page 5-47*)
- Mosaic (MOSAIC) (*page 5-55*)
- Zoom (ZOOM) (*page 5-53*)

POSTRZ (posterization) MIX button

During the transition, hues are simplified by quantizing brightness to the levels 16→8→4→8→16, for a poster-like effect.



POSTRZ MIX dissolve

To cancel a posterization mix, press the NORMAL MIX button.

Note

A posterization mix cannot be combined with the posterization input effect (*page 5-50*).

B&W MIX button
During the transition, the image changes to black and white before returning to color.
To cancel a B&W mix, press the NORMAL MIX button.

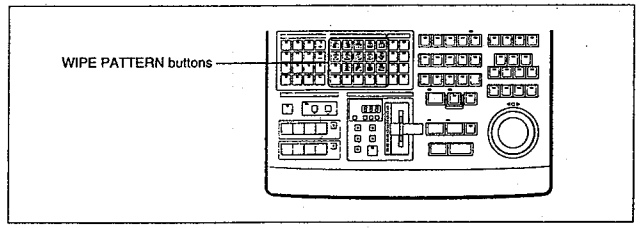
LUMINA (luminance) CLIP TRANS (transition) button
This effect provides one type of luminance key. As the transition proceeds, portions of B-bus video of progressively increasing brightness are replaced by the corresponding portions of A-bus video.
If the REVERSE button in the EFFECT TRANSITION section is lit, the brighter portions of A-bus video are inserted first, followed by the darker portions.
To cancel the luminance clip transition effect, press the NORMAL MIX button, or press the LUMINA CLIP TRANS button once more.

Wipe

A wipe is an effect which uses a geometrical pattern to replace A-bus video with B-bus video.
If there are audio inputs to the buses, they are cross-faded as the video wipe progresses.

Selecting a wipe effect

Press one of the buttons in the WIPE PATTERN section, turning it on.



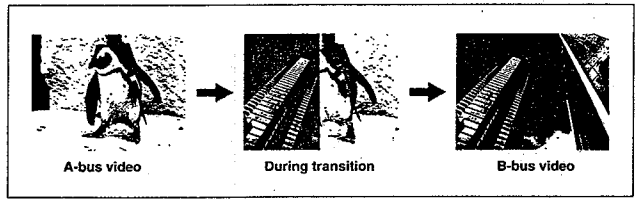
Selecting a wipe effect

Wipe patterns

The wipe patterns selectable with the buttons in the WIPE PATTERN section are as follows.

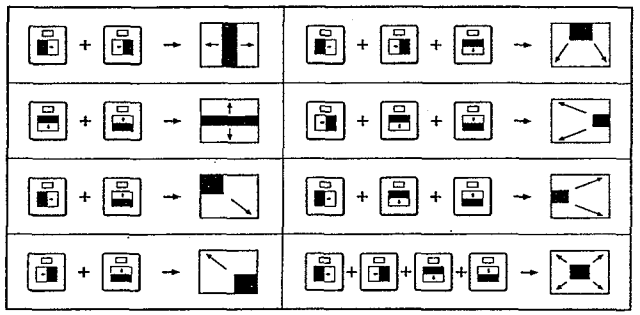
Horizontal and vertical wipe buttons ( ).
B-bus video appears on the edge of A-bus video. The pattern (B-bus video) expands in the direction indicated by the arrow, replacing A-bus video.

Example: Wipe selected with button



Wipe selected with button

A variety of patterns can be created by pressing more than one of the horizontal and vertical wipe buttons. Following are some examples.



Combined horizontal and vertical wipe patterns

Notes

- You can change the position of the pattern ( ) created by pressing all four of the buttons or by pressing the button.

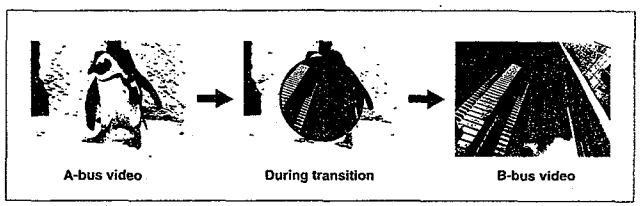
  For details, see "Changing the pattern position" (page 5-38).

- When two or more of the horizontal/vertical wipe buttons are lit, cancel a pattern selection by pressing the appropriate button, turning it off.

buttons

B-bus video appears in the center of A-bus video, and replaces A-bus video as the pattern expands.

Example: Wipe selected with button



Wipe selected with button

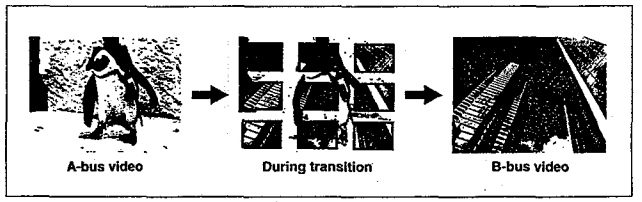
Note

You can change the position of these patterns.

For details, see "Changing the pattern position" (page 5-38).

button

A-bus video is divided into a 3 by 3 grid, and B-bus video appears in center of each of the small blocks, expanding to replace A video.



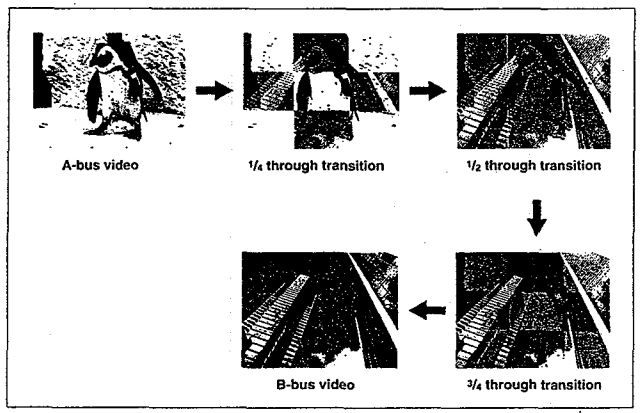
Wipe selected with button

Note

You can use this wipe in combination with the multi-screen input effect (MULTI, MULTI 2 buttons).

button

B-bus video appears as thin stripes in four locations, and expands to the right. At a stage 1/4 of the way through the transition, the screen is divided into a 3 by 3 grid, like the pattern shown on the button. Subsequent stages are shown below.



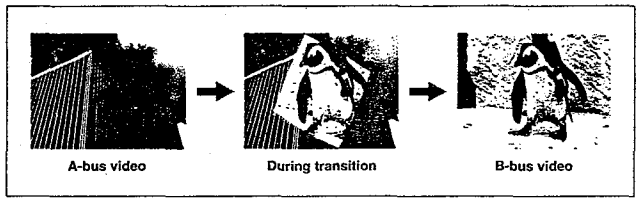
Wipe selected with button

Note

This wipe can be combined for impressive effects with the multi-screen input effect (MULTI, MULT2 buttons).

button

B-bus video appears in the center of A-bus video, and replaces A-bus video as the pattern expands. During the transition the square pattern rotates in a clockwise direction.



Wipe selected with button

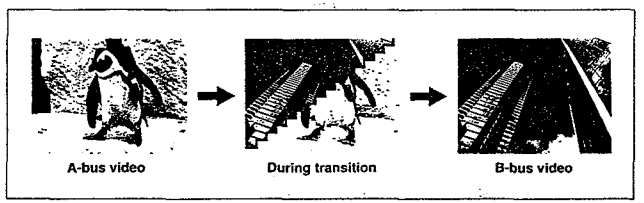
Note

You can change the position of this pattern.

For details, see "Changing the pattern position" (page 5-38).

button

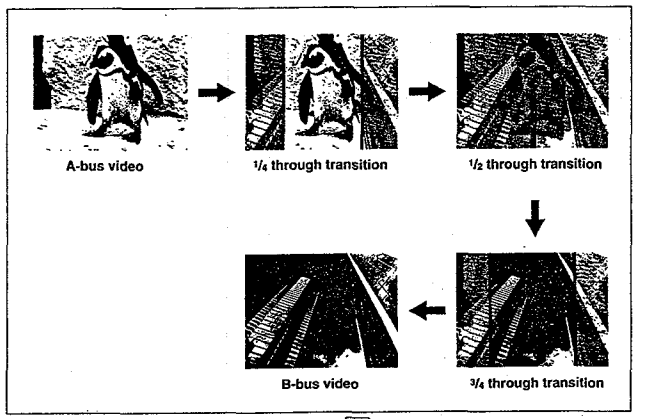
B-bus video appears in the upper left corner of A-bus video, and replaces A-bus video as the zigzag border moves toward the lower right.



Wipe selected with button

button

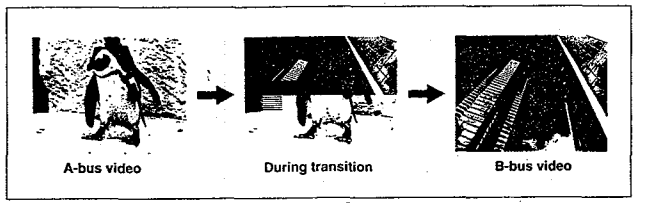
B-bus video appears as thin stripes on the left and right sides of A-bus video, and replaces A-bus video as the stripes move toward the center. Halfway through the transition, the stripes meet in the center of the screen. Subsequent stages are shown below.



Wipe selected with button

button

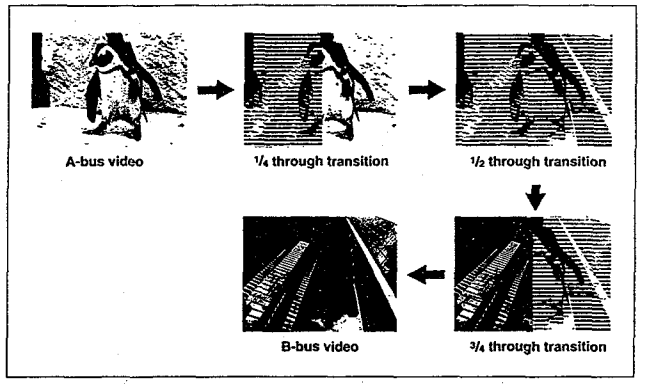
A striped band appears in the upper left corner of A-bus video. B-bus video replaces A-bus video as the band snakes through the screen in the direction shown by the arrow.



Wipe selected with button

SPLIT SLIDE button

Stripes of B-bus video appear at the edge of A-bus video, and reach the opposite side halfway through the transition. As the transition progresses, stripes of A-bus video begin to slide off the screen, finally leaving only B-bus video.



Wipe selected with the SPLIT SLIDE button

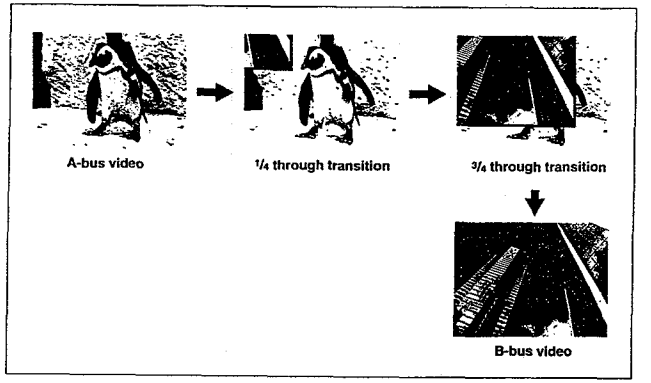
Notes

- The direction of the slide can be changed with the horizontal/vertical wipe buttons ( ).
- A split slide can be combined with a scroll wipe (*page 5-37*), although the combined transition may not be as smooth as a normal transition.

For details, see "Selecting the wipe direction" (page 5-39).

SLIDE IN button

B-bus video slides in, replacing A-bus video.



Wipe selected with the SLIDE IN button

Notes

- The direction of the slide can be changed with the horizontal/vertical wipe buttons ( ).

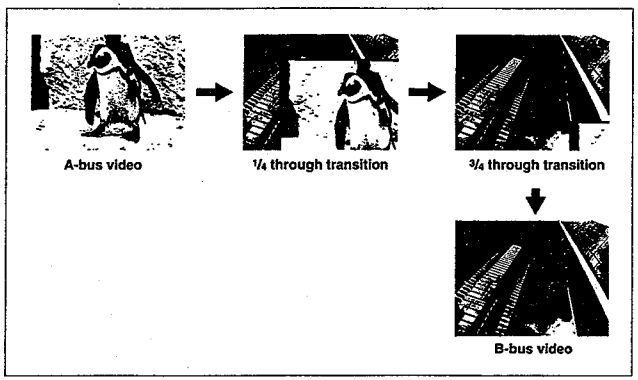
For details, see "Selecting the wipe direction" (page 5-39).

- The transition in the slide in effect may not always be as smooth as a normal transition.
- The slide in effect cannot be combined with the mosaic (*page 5-55*) and zoom (*page 5-53*) input effects.

1-52

SLIDE OUT button

A-bus video slides out, leaving B-bus video.



Wipe selected with the SLIDE OUT button

Notes

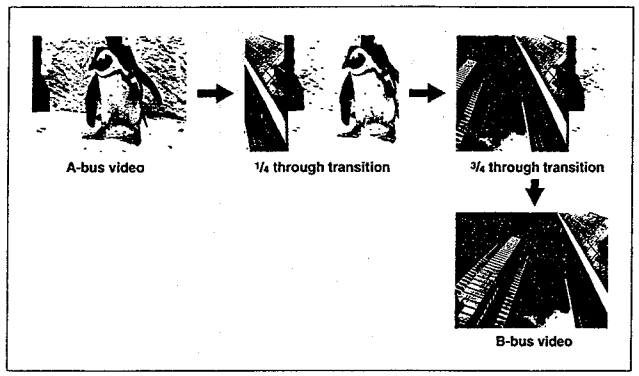
- The direction of the slide can be changed with the horizontal/vertical wipe buttons ( ).

  For details, see "Selecting the wipe direction" (page 5-39).

- The transition in the slide out effect may not always be as smooth as a normal transition.
- The slide out effect cannot be combined with the mosaic (*page 5-55*) and zoom (*page 5-53*) input effects.

SCROLL button

B-bus video slides in, while A-bus video slides out.



Wipe selected with the SCROLL button

Notes

- The direction of the scroll can be changed with the horizontal/vertical wipe buttons ( ).

  For details, see "Selecting the wipe direction" (page 5-39).

- The transition in the scroll effect may not always be as smooth as a normal transition.
- The scroll effect can be combined with a split slide wipe (*page 5-34*).
- The scroll effect cannot be combined with the mosaic (*page 5-55*) and zoom (*page 5-53*) input effects.

USER 1 and USER 2 buttons

Frequently used patterns can be assigned to these buttons, using item 201 WIPE PATTERN in the setup menu.

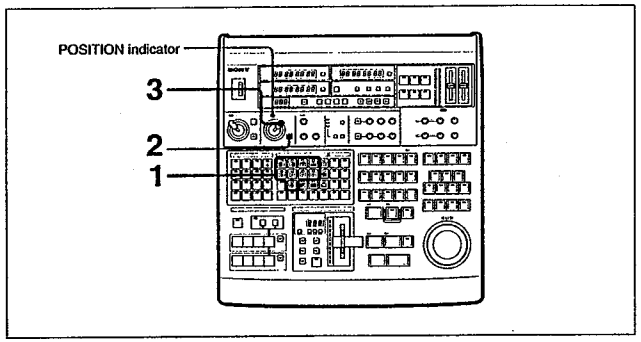
For details, see Chapter 8.

Changing the pattern position

You can change the center positions of the following patterns.

- Patterns selected with the [ ] [ ] [ ] [ ] [ ] buttons.
- The pattern ([ ]) obtained by pressing and lighting all of the [ ] [ ] [ ] [ ] buttons.

To change the positions, proceed as follows.



Changing a pattern position

1 Select a pattern with a button in the WIPE PATTERN section.
The POSITION indicator lights.

2 Press the POSITION ON/OFF button.
The button lights, and the POSITION joystick is enabled.

3 While viewing the monitor, move the joystick to adjust the pattern position.

To restore the original pattern position

Press the POSITION ON/OFF button, turning it off.

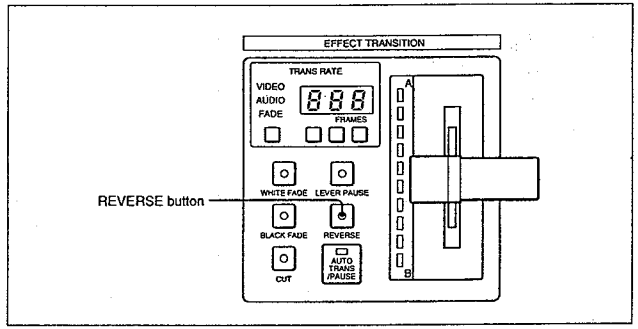
Notes

- The POSITION ON/OFF button should normally be off, except when you are intentionally changing a pattern position.
- When the POSITION ON/OFF button is on, some wipe patterns are slightly larger than normal.

Selecting the wipe direction

To reverse the wipe direction

Press the REVERSE button in the EFFECT TRANSITION section, turning it on.



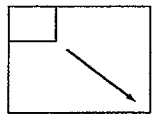
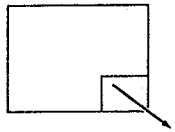
To reverse the wipe direction

To change the direction of a specific wipe

When using effects selected with the SPLIT SLIDE, SLIDE IN, SLIDE OUT and SCROLL buttons, the horizontal and vertical wipe buttons ([ ] [ ] [ ] [ ]) may be used to change the direction.

- **SPLIT SLIDE and SCROLL**
  Press one of the horizontal or vertical wipe buttons, so that it begins to flash.
- **SLIDE IN and SLIDE OUT**
  Press one of the horizontal or vertical wipe buttons, so that it begins to flash.
  If you press one each of the horizontal wipe buttons ([ ] [ ]) and the vertical wipe buttons ([ ] [ ]), the direction becomes a slant.

Example: If [ ] and [ ] are flashing

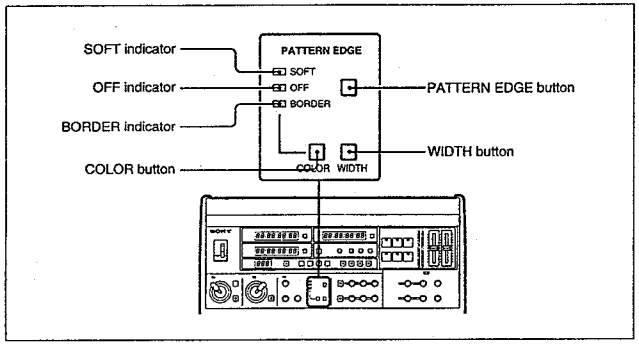
SLIDE IN	SLIDE OUT
	
B-bus video slides in from upper left.	A-bus video slides out from lower right.

Notes

- To extinguish a flashing horizontal or vertical wipe button, press it once more.
- If you select a slide or scroll wipe with one of the horizontal or vertical wipe buttons, and then select another wipe or mix by pressing the SPLIT SLIDE, SLIDE IN, SLIDE OUT or SCROLL button, the most recently pressed horizontal or vertical wipe button starts to flash.

Adjusting pattern edges

Except in the case of wipes selected with the [ ], [ ] and [ ] buttons, it is possible to adjust the pattern edge at the border between A-bus and B-bus signals. Use the controls in the PATTERN EDGE section.



Adjusting pattern edges

To make the edge softer

Press the PATTERN EDGE button, lighting the SOFT indicator.

To make the edge sharper

Press the PATTERN EDGE button, lighting the OFF indicator.

To give the edge a colored border

Press the PATTERN EDGE button, lighting the BORDER indicator, and then press the COLOR button to select one of the 15 border colors. The colors change in the opposite order if you hold down the SHIFT button while pressing the COLOR button.

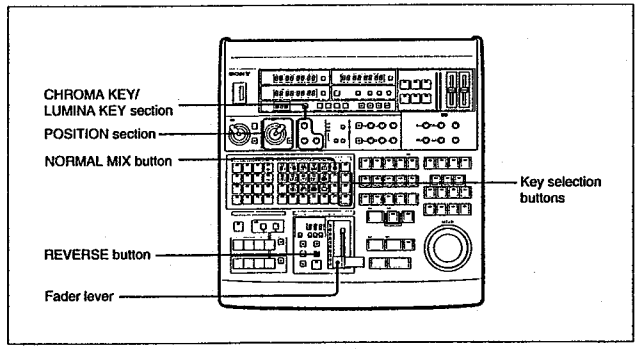
To change the border width

Press the PATTERN EDGE button, lighting the BORDER indicator, and then press the WIDTH button to change the width in three steps.

Key

This effect removes certain portions of B-bus video, replacing them with A-bus video.

The following controls are used in key effect operations.



Key effect controls

Selecting a key effect

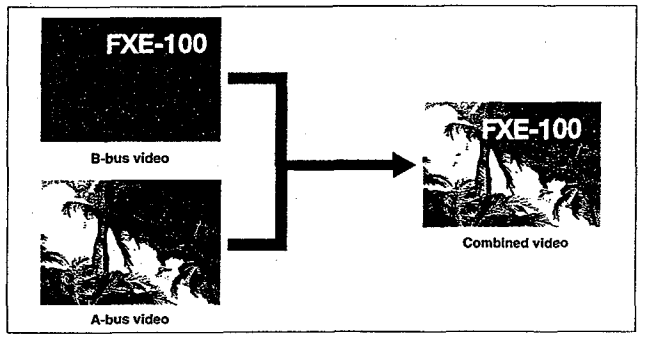
To select a key effect, pull the fader lever all the way down to the B side and press one of the key selection buttons (LUMINA KEY, CHROMA KEY or P IN P) in the MIX/EFFECT section, turning it on.

Key types

The effects selectable with the key selection buttons are as follows.

LUMINA (luminance) KEY button

Portions of B-bus video whose luminance (brightness) is equal to or higher than a specified reference level are replaced by A-bus video.



Luminance key

The reference luminance level is specified using knobs in the CHROMA KEY/ LUMINA KEY section.

- For bright sections of the video, use the CLIP/CLIP HIGH knob.
- For dark sections, use the GAIN/CLIP LOW knob.

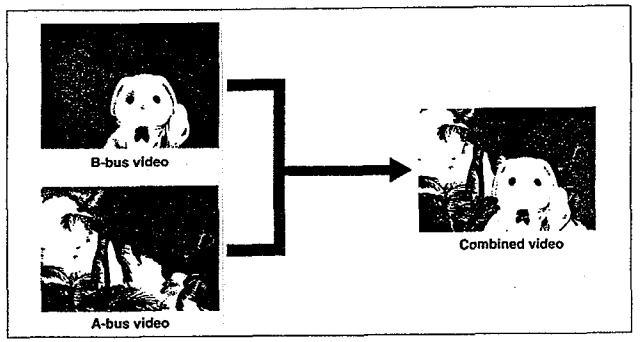
To cancel the luminance key effect, press the NORMAL MIX button, or press the LUMINA KEY button once more.

Note

The luminance key effect can be used in combination with SLIDE IN or SLIDE OUT wipes.

CHROMA KEY button

Portions of B-bus video of a specified color are replaced by A-bus video.



Chroma key

The reference color is specified using knobs in the CHROMA KEY/LUMINA KEY section.

- Specify the hue with the HUE knob.
- Specify the saturation with the CLIP/CLIP HIGH knob.
- To adjust the brightness of the inserted video (A-bus video), use the GAIN/CLIP LOW knob.

To cancel the chroma key effect, press the NORMAL MIX button, or press the CHROMA KEY button once more.

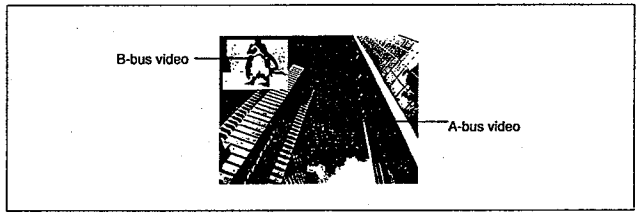
Note

When the chroma key effect is selected, the zoom input effect cannot be applied to B-bus video.

1-56

P IN P (picture-in-picture) button

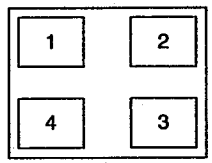
B-bus video is reduced to 1/3 normal size both horizontally and vertically, and inserted into A-bus video.



Picture in picture

There are two ways to specify the position at which B-bus video will be inserted.

- Press the lit P IN P button while holding down the SHIFT button.



Each time the button is pressed, B-bus video changes position in the order 1→2→3→4→1...
(In the actual picture, the reduced video will be slightly further left than the positions shown.)

- Press the POSITION ON/OFF button in the POSITION section, turning it on, and adjust the position with the POSITION joystick.

To cancel the picture-in-picture effect, press the NORMAL MIX button or press the P IN P button once more.

Notes

- When the P IN P button is lit, wipe patterns selected with the [ ], [ ], [ ] and [ ] buttons appear in the reduced video.
- Picture-in-picture video consists of a single field, so the B-BUS and FIELD/FRAME buttons in the INPUT EFFECT section light automatically when the P IN P button is lit.
- When the P IN P button is lit, the following input effects cannot be applied to B-bus signals.
  - Multi-screen (MULTI) (*page 5-47*)
  - Multi-screen 2 (MULTI 2) (*page 5-47*)
  - Mosaic (MOSAIC) (*page 5-55*)
  - Zoom (ZOOM) (*page 5-53*)
  - Picture trail (PIX TRAIL) (*page 5-49*)

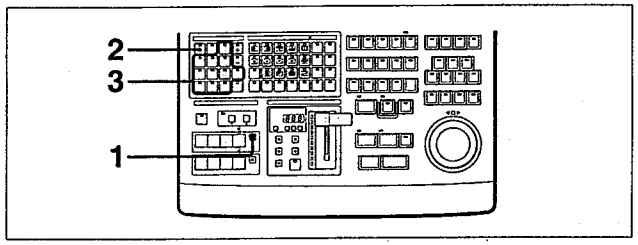
1-57

Input Effects

In addition to video switching effects such as wipes, you can apply digital effects to bus signals with the buttons in the INPUT EFFECT section. These effects may be applied independently to bus A and bus B.

Proceed as follows to select digital effects for each bus.

Example: Selecting input effects for bus A



Selecting digital effects for bus A

1 Press the A-BUS INPUT EFFECT ON/OFF button in the VIDEO INPUT SELECT section, turning it on.

2 Press the A-BUS button in the INPUT EFFECT section, turning it on.

3 Press the INPUT EFFECT button corresponding to the desired effect. You can press several buttons for combined effects.

For more information about combined effects, see "Combined input effects" (page 5-56).

Follow the same procedure to select input effects for B-bus video.

Note

If setup menu item 306 INPUT EFFECT AUTO SELECT has been set to ON, input effects are applied automatically to the bus selected by the fader lever. The A-BUS and B-BUS buttons in the INPUT EFFECT section are disabled and do not light when pressed.

For details, see Chapter 8.

Freeze

This effect reads a video frame into a frame memory buffer, and outputs a still picture (freeze frame) consisting of the contents of frame memory. Digital effects such as monotone and mosaic may be applied to the frame memory output.

To select the freeze effect

Press the FREEZE button, turning it on.

About frame freeze and field freeze

When the FREEZE button lights, the FRAME/FIELD button lights automatically. While it is lit, the freeze video output consists of a single field (the first of the two fields in the frame), which may reduce blurring if there is rapid motion in the picture.

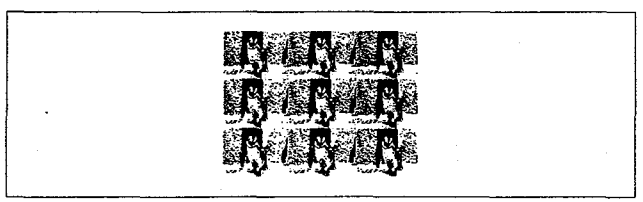
To select output of a complete frame (two fields), press the FRAME/FIELD button, turning it off.

To return to normal playback

Press the FREEZE button, turning it off, or press the RESET button, turning it on.

Multiple screens

The screen is split into a 3 by 3 grid, with reduced video in each window.



Multiple screens

To select the multi-screen effect

Press the MULTI or MULTI 2 button.

The button lights, and moving video reduced to 1/3 normal size both vertically and horizontally appears in the upper left corner.

- You can change the position of the moving video by pressing the '+' and '–' keys in the numeric keypad.
- Multi-screen effects can be combined with the strobe effect.

When the '+' and '–' keys are pressed

When the MULTI button is lit

1	2	3
4	5	6
7	8	9

+ key

When the '+' key is pressed for the first time, the video in block 1 changes to a still picture and the video in block 2 begins to move. Each time the key is pressed, the moving video moves to the next block, in the order shown at left. When the moving video reaches block 9, pressing the '+' key stops motion in all blocks. Press it again and the video in block 1 starts to move.

1	9	8
7	6	5
4	3	2

– key

When the '–' key is pressed for the first time, the video in block 1 changes to a still picture and the video in block 2 begins to move. Each time the key is pressed, the moving video moves to the next block, in the order shown at left. When the moving video reaches block 9, pressing the '–' key makes the video in block 1 start to move. Press it again and the video stops in all blocks.

When the MULTI 2 button is lit

1	2	3
8	9	4
7	6	5

+ key

The effect is the same as the MULTI effect, except that the order is as shown at left.

1	9	8
3	2	7
4	5	6

– key

The effect is the same as the MULTI effect, except that the order is as shown at left.

When the STROBE button is pressed

When the MULTI button is lit

1	2	3
4	5	6
7	8	9

STROBE plus MULTI effect

Pressing the STROBE button while the MULTI button is lit causes the blocks shown at left to change to still video, one after the other in the order shown. When block 9 is reached, new still pictures begin to appear from the upper left block in the order 1→2→3..., repeating the process indefinitely until the STROBE button is pressed once more, turning it off.
The '+' and '–' keys can be used to adjust the strobe interval. Pressing the '+' key increases the interval and pressing the '–' key decreases it. When the maximum or minimum interval is reached, the '+' or '–' key begins to flash.

When the MULTI 2 button is lit

1	2	3
8	9	4
7	6	5

STROBE plus MULTI 2 effect

Pressing the STROBE button while the MULTI 2 button is lit causes the blocks shown at left to change to still video, one after the other in the order shown. The strobe effect ends when block 9 is reached. Block 9 changes to a moving picture, and the other 8 blocks remain as still pictures.
You can adjust the strobe interval with the '+' and '–' keys before you execute an edit using this effect.

To return to normal playback

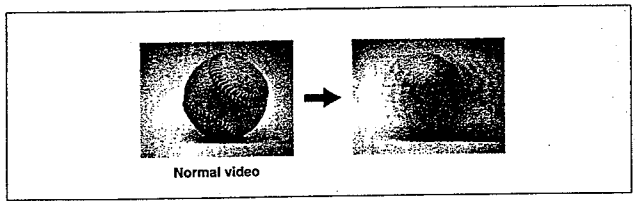
Press the MULTI or MULTI 2 button, turning it off, or press the RESET button, turning it on.
After returning to a normal picture, the MULTI or MULTI 2 button can be pressed again to recall the most recent multi-screen picture. The button lights, and a moving picture automatically appears in the most recently moving block.

Notes

- The multi-screen effect can be combined with wipes selected with the and buttons (*page 5-31*), for impressive multi-screen wipes.
- The multi-screen effect cannot be combined with the mosaic mix effects (*page 5-27*). Nor can it be applied to the reduced picture (B-bus video) in the picture-in-picture effect (*page 5-44*).

Picture trail

This effect creates a trail of images behind a moving subject.



Picture trail

To select the picture trail effect

Press the PIX TRAIL button, turning it on.

To return to normal playback

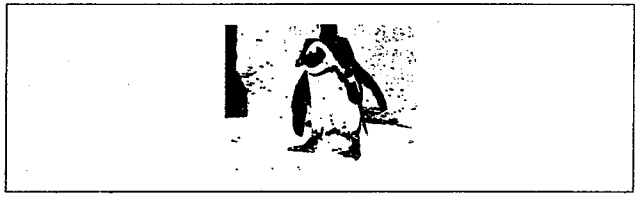
Press the PIX TRAIL button, turning it off, or press the RESET button, turning it on.

Notes

- It is not possible to adjust the length of time the trailing pictures remain visible.
- The picture trail effect cannot be applied to the reduced picture (B-bus video) in the picture-in-picture effect (*page 5-44*).

Posterization

This effect produces a picture with simplified hues, like a poster. The picture is simplified by quantizing brightness to 16, 8 or 4 levels.



Posterization

To select the posterization effect

Press the POSTRZ button, turning it on.

To adjust the number of levels

To reduce the number of levels (increase the posterization effect), press the '+' key in the numeric keypad. To increase the number of levels, press the '–' key.

To return to normal playback

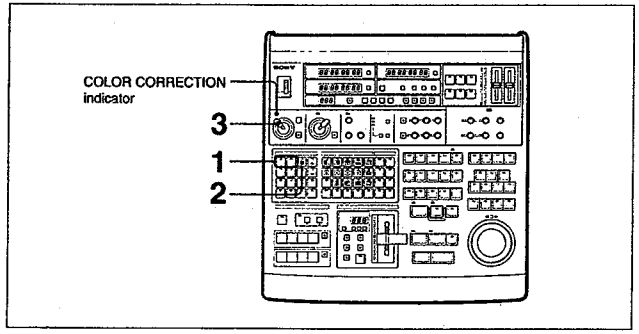
Press the POSTRZ button, turning it off, or press the RESET button, turning it on.

Note

The posterization input effect cannot be combined with a posterization dissolve.

Color correction

By using the color balance controls, you can adjust the white balance and change the overall tonal balance of the picture. Proceed as follows.

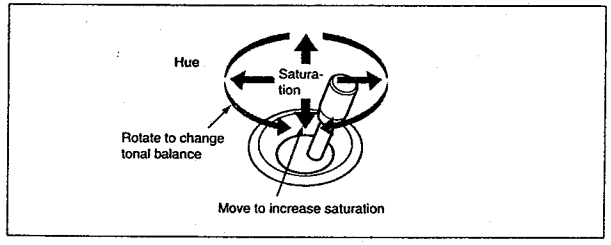


Performing color correction

1 Select the object of the color correction by pressing the A-BUS button or B-BUS button in the INPUT EFFECT section.

2 Press the COLOR CORRECT button in the INPUT EFFECT section, turning it on.
The COLOR CORRECTION indicator lights to show that the controls in the COLOR CORRECTION section are enabled.

3 While viewing the monitor, move the joystick to perform color correction.



About the correction range

The color correction range (sensitivity of the joystick) can be set to one of two steps under item 205 COLOR CORRECTION ADJUSTMENT WIDTH in the setup menu.

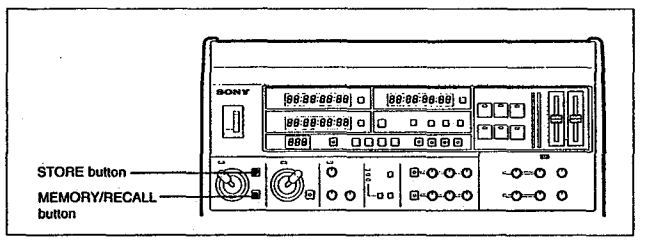
For details, see Chapter 8.

When adjusting the white balance

Find a portion of the picture that should appear as pure white. Then, while viewing the monitor, move the joystick until the white portion is shown as pure white.

To save the adjusted color values in memory

Press the STORE button together with the MEMORY/RECALL button.



Saving adjusted color values in memory

To load adjusted values from memory

Press the MEMORY/RECALL button only, turning it on. To return to the state before the values were recalled, press the button once more, turning it off.

To return to the original color balance

Press the COLOR CORRECT button, turning it off, or press the RESET button, turning it on.

Monotone

This effect produces a monotone (monochrome) picture.

To select the monotone effect

Press the MONOTONE button, turning it on.
Pressing the COLOR CORRECT button as well, turning it on, allows you to adjust the monotone color with the controls in the COLOR CORRECTION section.

To return to normal playback

Press the MONOTONE button, turning it off, or press the RESET button.

Strobe

This effect freezes the picture at selected frame intervals.

To select the strobe effect

Press the STROBE button, turning it on.

To select the frame interval

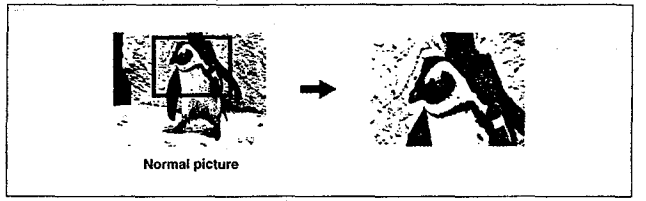
Press the '+' key in the numeric keypad to increase the frame interval, and the '–' key to decrease it. When the maximum or minimum interval is reached, the '+' or '–' key begins to flash.

To return to normal playback

Press the STROBE button, turning it off, or press the RESET button, turning it on.

Zoom

This effect expands a selected area of the picture to fill the entire screen.



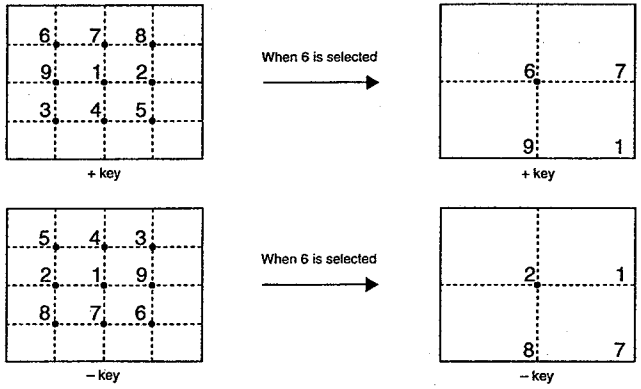
Zoom

To select the zoom effect

Press the ZOOM button, turning it on.

To select the zoom center

Press the '+' or '–' key. Pressing the key selects a set of four zoom blocks, centered around the dots numbered 1 to 9 in the illustrations below. The four blocks around the dots are doubled in size vertically and horizontally.



(In the actual picture, zoom centers will be sightly to the left of the positions shown by the dots in the illustrations above.)

To return to normal playback

Press the ZOOM button, turning it off, or press the RESET button, turning it on. If you press the ZOOM button again, the most recently selected blocks automatically expand to fill the screen.

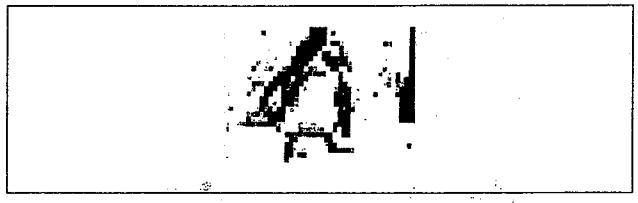
Note

The zoom effect cannot be combined with the following wipes.
- SLIDE IN (*page 5-35*)
- SLIDE OUT (*page 5-36*)
- SCROLL (*page 5-37*)

The zoom effect cannot be applied to the following kinds of video.
- The reduced picture (B-bus video) in the picture-in-picture effect (*page 5-44*).
- B-bus video in the CHROMA KEY effect (*page 5-43*).

Mosaic

This effect applies a mosaic grid to the picture. The coarseness of the mosaic can be adjusted.



Mosaic

To select the mosaic effect

Press the MOSAIC button, turning it on.

To adjust the coarseness of the mosaic

Press the '+' key for a coarser grid, and the '–' key for a finer one. The coarseness can be adjusted in four steps. When the maximum or minimum level is reached, the '+' or '–' key begins to flash.

To return to normal playback

Press the MOSAIC button, turning it off, or press the RESET button, turning it on.

Note

The mosaic effect cannot be combined with the following effects.
- MOSAIC MIX (*page 5-27*)
- SLIDE IN (*page 5-35*)
- SLIDE OUT (*page 5-36*)
- SCROLL (*page 5-37*)

Combined input effects

You can combine input effects in various ways. The tables below show the results of button combinations.

Table A shows the effects obtained when one button in the INPUT EFFECT section is lit and another button is pressed.
Tables B-1 and B-2 show the effects obtained when two buttons are lit and a third button is pressed.

Note

The posterization (POSTRZ button) and monotone (MONOTONE button) effects can be combined with any other input effect. Therefore they are omitted from the tables below.

Combined input effects (A)

Pressed first / Pressed second	Field[a]					Field or Frame[b]	
	MOSAIC	MULTI	MULTI 2	STROBE	ZOOM	FREEZE	PIX TRAIL
MOSAIC	Off	MOSAIC	MOSAIC	MOSAIC STROBE	MOSAIC	FREEZE MOSAIC	MOSAIC PIX TRAIL
MULTI	MULTI	Off	MULTI	MULTI STROBE	MULTI	MULTI	MULTI
MULTI 2	MULTI 2	MULTI 2	Off	STROBE MULTI 2	MULTI 2	MULTI 2	MULTI 2
STROBE	MOSAIC STROBE	MULTI STROBE	MULTI 2 STROBE	Off	ZOOM STROBE	STROBE	PIX TRAIL STROBE
ZOOM	ZOOM	ZOOM	ZOOM	STROBE ZOOM	Off	ZOOM	ZOOM
FREEZE	MOSAIC FREEZE	MULTI FREEZE	MULTI 2 FREEZE	FREEZE	ZOOM FREEZE	Off	PIX TRAIL FREEZE
PIX TRAIL	MOSAIC PIX TRAIL	PIX TRAIL	PIX TRAIL	STROBE PIX TRAIL	PIX TRAIL	PIX TRAIL	Off

a) The effects are applied to field data.
b) The effects are applied to field data if the FRAME/FIELD button is lit. Otherwise they are applied to frame data.

Combined input effects (B-1)

Pressed first / Pressed second	Field[a]						
	MOSAIC STROBE	MOSAIC FREEZE	MULTI STROBE	MULTI FREEZE	MULTI 2 STROBE	MULTI 2 FREEZE	STROBE ZOOM
MOSAIC	STROBE	FREEZE	STROBE MOSAIC	FREEZE MOSAIC	STROBE MOSAIC	FREEZE MOSAIC	STROBE MOSAIC
MULTI	STROBE MULTI	MULTI	Off	Off	STROBE MULTI	MULTI	STROBE MULTI
MULTI 2	STROBE MULTI 2	MULTI 2	STROBE MULTI 2	MULTI 2	Off	Off	STROBE MULTI 2
STROBE	MOSAIC	MOSAIC STROBE	MULTI	MULTI STROBE	MULTI 2	MULTI 2 STROBE	ZOOM
ZOOM	STROBE ZOOM	ZOOM	STROBE ZOOM	ZOOM	STROBE ZOOM	ZOOM	STROBE
FREEZE	MOSAIC FREEZE	MOSAIC	MULTI FREEZE	MULTI	MULTI 2 FREEZE	MULTI 2	ZOOM FREEZE
PIX TRAIL	MOSAIC STROBE PIX TRAIL	MOSAIC PIX TRAIL	STROBE PIX TRAIL	PIX TRAIL	STROBE PIX TRAIL	PIX TRAIL	STROBE PIX TRAIL

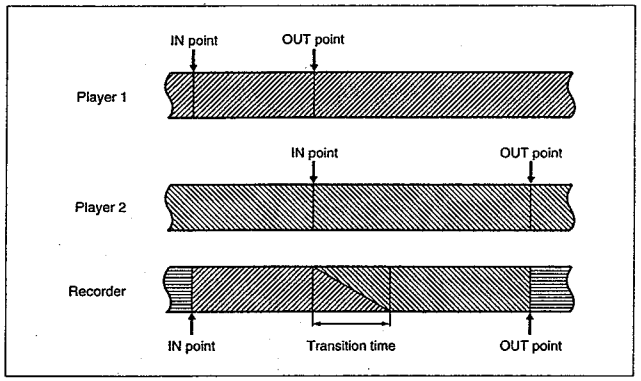
Combined input effects (B-2)

Pressed first / Pressed second	Field[a]				Field or Frame[b]
	STROBE PIX TRAIL	ZOOM FREEZE	MOSAIC PIX TRAIL STROBE	MOSAIC PIX TRAIL FREEZE	PIX TRAIL FREEZE
MOSAIC	STROBE MOSAIC	MOSAIC FREEZE	PIX TRAIL STROBE	PIX TRAIL FREEZE	PIX TRAIL FREEZE MOSAIC
MULTI	STROBE MULTI	MULTI	STROBE MULTI	FREEZE MULTI	MULTI
MULTI 2	STROBE MULTI 2	MULTI 2	STROBE MULTI 2	FREEZE MULTI 2	MULTI 2
STROBE	PIX TRAIL	ZOOM STROBE	MOSAIC PIX TRAIL	MOSAIC PIX TRAIL STROBE	PIX TRAIL STROBE
ZOOM	STROBE ZOOM	Off	STROBE ZOOM	ZOOM	ZOOM
FREEZE	PIX TRAIL FREEZE	ZOOM	MOSAIC PIX TRAIL FREEZE	MOSAIC PIX TRAIL	PIX TRAIL
PIX TRAIL	STROBE	PIX TRAIL	MOSAIC STROBE	MOSAIC FREEZE	FREEZE

a) The effects are applied to field data.
b) The effects are applied to field data if the FRAME/FIELD button is lit. Otherwise they are applied to frame data.

Setting the Transition Time

This section explains how to set the transition time, or duration, of special effects.



Transition time

Note

You do not need to set a transition time if you have selected cut editing by pressing the CUT EDIT button in the EDIT TYPE section.
When using dissolve or wipe effects, the effect is the same as a cut if the transition time is set to 0.

There are two ways to set the transition time.
- Use the TRANS RATE buttons in the EFFECT TRANSITION section.
- Use the numeric keypad.

Setting video and audio transition times independently

If you have selected split editing (the AUDIO SPLIT button in the EDIT MODE section is lit), you can set independent transition times for video and audio.
- To set the video transition time, press the VIDEO/AUDIO/FADE button in the EFFECT TRANSITION section until only the VIDEO indicator is lit.
- To set the audio transition time, press the VIDEO/AUDIO/FADE button until only the AUDIO indicator is lit.

For more information about split editing, see "Setting Independent Video and Audio IN Points —Split Editing" (page 6-8).

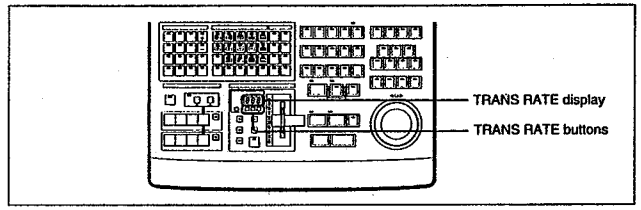
When setting the fade in/fade out transition time

Press the VIDEO/AUDIO/FADE button in the EFFECT TRANSITION section until only the FADE indicator is lit.

For more information about fade in and fade out, see "Editing With Fade In and Fade Out" (page 6-16).

Setting the transition time with the TRANS RATE buttons

The TRANS RATE buttons in the EFFECT TRANSITION section allow you to select any transition time in the range from 0 to 999 frames. The length of one frame is $^1/_{30}$ seconds (FXE-100) or $^1/_{25}$ seconds (FXE-100P).

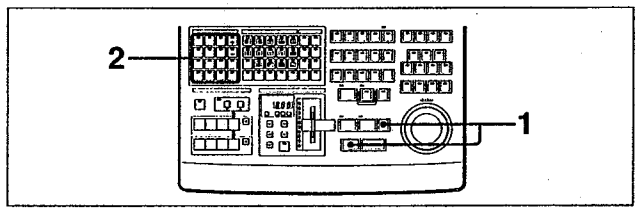


Setting the transition time with the TRANS RATE buttons

- Each time you press a TRANS RATE button, the digit in the display column above the button is incremented by 1. The digit '9' is succeeded by '0'.
- If you press a TRANS RATE button together with the SHIFT button, the display column value is decremented by 1. In this case, the digit '0' is succeeded by '9'.

Setting the transition time with the numeric keypad

You can also enter a transition time with the numeric keypad. Proceed as follows.



Setting the transition time with the numeric keypad

1 Press the SET TRANS (=SHIFT + SET DUR) button in the TIME MARK section.
The unit enters numeric keypad mode, enabling the numeric keys. The number in the TRANS RATE display goes out.

2 After entering the desired number of frames with the numeric keys, press the ENT key.
The transition time is set to the entered value, and the unit exits numeric keypad mode.

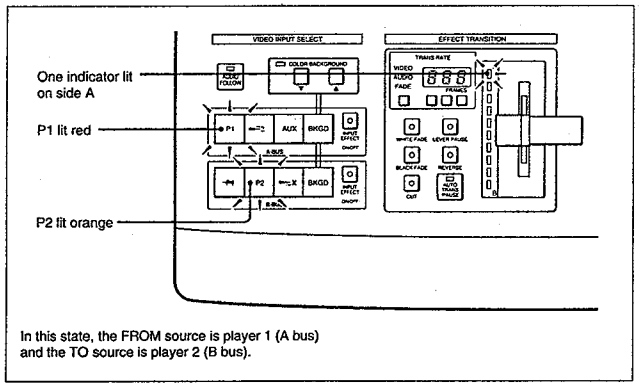
Note

In some cases, the actual transition time of the video on the monitor can be slightly shorter than the entered value, so you may wish to set it to a slightly longer value.

Checking FROM and TO Sources

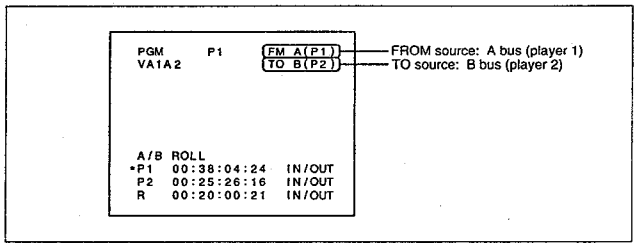
After making the necessary settings, always make a final check of the video signals of the FROM and TO sources before executing a preview or edit.
Check the transition indicators next to the fader lever (normally only one should be lit). Also check the state of the video input selection buttons or the status display on the main monitor.

Check the transition indicators and video input selection buttons



Checking FROM and TO sources on the control panel

Check the monitor status display



Checking FROM and TO sources on the monitor

To reverse the FROM and TO sources

If the FROM and TO sources are reversed, move the fader lever or press the CUT button in the EFFECT TRANSITION section to switch them.

Note

The fader lever is disabled while the AUTO TRANS/PAUSE button is lit. Before using the fader lever to reverse sources, extinguish the AUTO TRANS/PAUSE button.

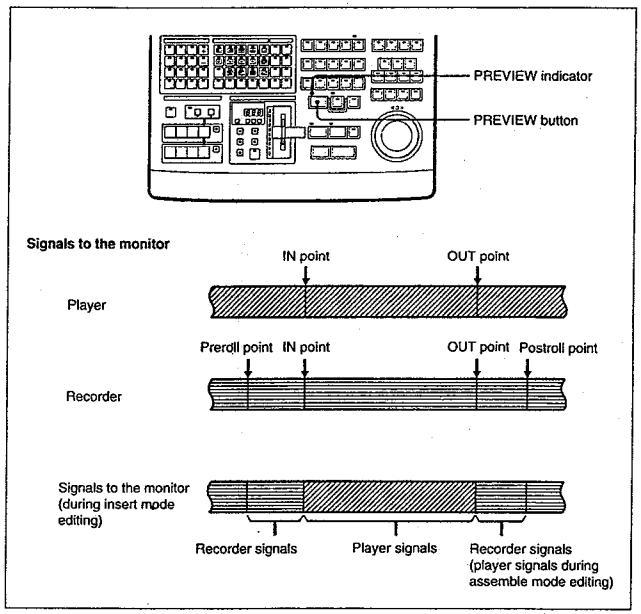
For details, see "Note on the fader lever" (page 4-13).

Preview—The Rehearsal Before Edit Execution

Instead of executing the edit as soon as you finish checking the FROM and TO sources, you can confirm the results of your edit decisions by previewing the edit on a monitor.
In a preview, a monitor connected to the recorder will display the same signals that will be recorded at execution time. You can also view these signals on the main monitor by pressing the SOURCE button in the MONITOR section, turning it on, and then selecting the recorder by pressing the R-VTR button in the SOURCE section.
When you preview the edit, control settings are not registered in the EDL. You can change or correct them as often as necessary.

Carrying out a preview

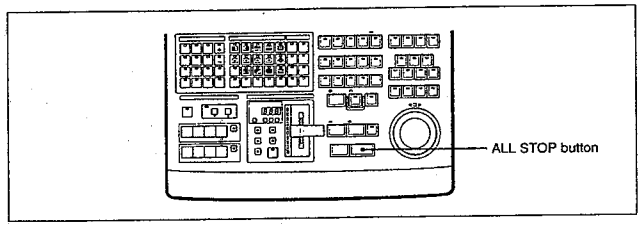
To preview the edit, press the PREVIEW button in the AUTO CONTROL section. The PREVIEW indicator above the button lights, and all of the selected VCRs run from their preroll points to their postroll points.
During the preview the following signals are output to the monitor.



Preview

To halt a preview

Press the ALL STOP button.
The PREVIEW indicator goes out and all VCRs stop.



Halting a preview

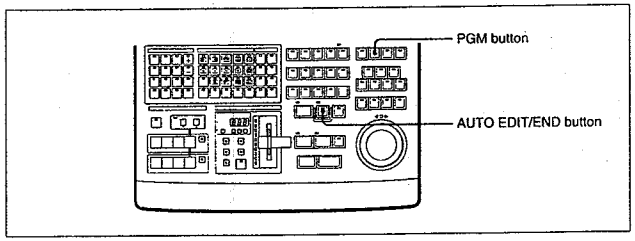
Sync grade display

During a preview, sync grade information is included in the status display.

For details, see "Sync Grade During Previews and Edit Execution" (page 5-65).

Executing the Edit

After checking the FROM and TO sources, execute the edit by pressing the AUTO EDIT/END button in the AUTO CONTROL section.
The specified VCRs are rewound to their preroll points, stop, and then begin to run in the forward direction. The AUTO EDIT/END button flashes during the preroll time, and lights when the recorder IN point is reached to indicate that recording has begun.
If you press the PGM button in the MONITOR section, turning it on, you can monitor the program video and audio signals on the main monitor.



Executing the edit

When the edit ends

- The AUTO EDIT/END button goes out, and all VCRs stop.
- The edit data is saved in the EDL. The number in the edit number display of the EDIT PGM section is incremented, and the unit is readied for a new edit.

For more information about the EDL, see Chapter 7.

If edit data has not been set correctly

An error code appears in a time counter display as soon as you press the AUTO EDIT/END button. The edit is not executed. Correct the data and repeat the edit.

If a warning sound is heard after edit execution starts

The unit leaves recording mode without registering the edit in the EDL. Warning sounds are issued in cases such as the following.

- No time code/CTL signals were found on the master tape.
- Connected equipment could not be controlled.
- Time data corresponding to edit settings could not be found on a tape.

To check the total execution time

To check the total execution time of an edit carried out on a single master tape, press the TOTAL (= SHIFT + CLEAR) button in the AUTO CONTROL section. The total time appears in the RECORDER time counter display, from the earliest recorded IN point to the last recorded OUT point. If the PGM MODE button in the EDIT PGM section is on, the total is for edits which were recorded and registered in the EDL. Otherwise it is the total for the earliest to the latest recorded edits on the tape.

To halt an edit (without registering it in the EDL)

Press the ALL STOP button.
All VCRs are stopped. The edit number is not incremented.

To halt an edit at a desired scene (and register it in the EDL)

Press the AUTO EDIT/END button, turning it off.
The edit number is incremented, and the master tape time code for the point where the button is pressed is registered as the recorder OUT point.

Sync grade display

During edit execution, sync grade information is included in the status display.

For details, see "Sync Grade During Previews and Edit Execution" (page 5-65).

Automatic settings after edit execution

After an edit is executed, some data items for the next edit are set automatically, as follows.

- **Edit mode:** The edit mode selected for the previous edit (and registered in the EDL after execution).
  However, assemble mode is selected after a first edit.
- **Edit type:** The edit type selected for the previous edit.
- **Video switching effect:** As follows, depending on the effect selected for the previous edit.

Previous edit type (selection button)	Automatically selected switching effect for next edit
Cut (CUT EDIT)	Cut
Other than cut edit (A-ROLL, A/B ROLL, MAN, SYNC ROLL)	Same as previous edit

- **Input effect:** Same as previous edit
- **Sources:** As follows, depending on sources selected for previous edit.

Previous edit type (selection button)	Automatically selected source for next edit
Cut (CUT EDIT)	Same source as previous edit
A-roll (A-ROLL)	A-bus source of previous edit
A/B roll (A/B ROLL)	TO source of previous edit
Manual effects (MAN)	
Sync roll (SYNC ROLL)	

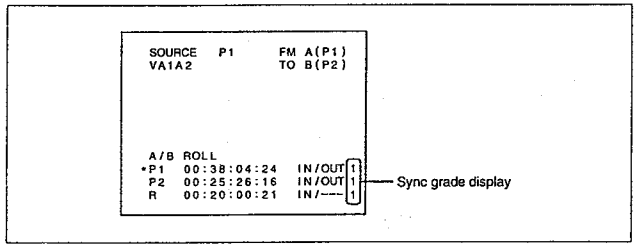
- **Edit number:** Number of previous edit plus 1.
- **Recorder IN point:** Recorder OUT point of previous edit.
- **Player IN point:** Player OUT point of previous edit.

Sync Grade During Previews and Edit Execution

During previews and automatic edits, the main monitor status display contains one-digit codes to indicate the degree of synchronizing precision between VCRs.

Note

If you set setup menu item 303 SYNC GRADE DISPLAY to OFF, this information will not be displayed.



Sync grade display

The meanings of the codes are as follows. The sync grade can be selected under item 301 SYNC GRADE in the setup menu.

Sync grade (status display)	Display code number
ACCURATE	1
+/– 1 FRAME	2
ROUGH	3
PREROLL&PLAY	4

For details, see Chapter 8.

Note

The sync grade is not displayed if setup menu item 104 EDIT REFERENCE is set to CTL.

If a VCR cannot be synchronized

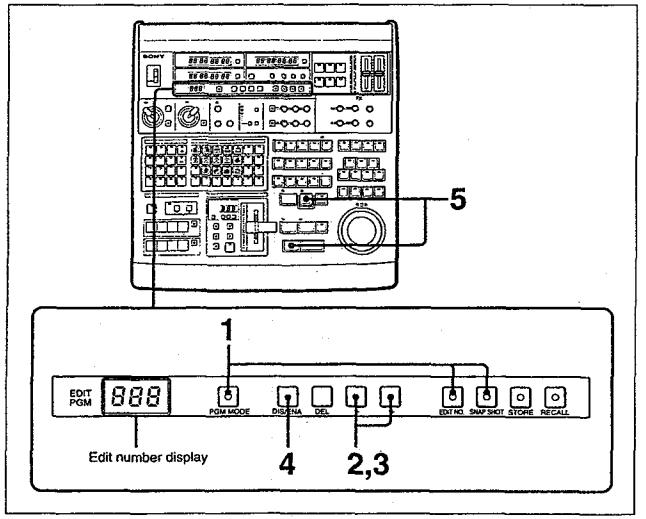
An error code appears in the corresponding time counter display.
In this case, use the setup menu to select a lower sync grade.

Automatic Execution of Multiple Edits —Auto Assembly

Automatic, sequential recording of edits registered in the EDL is called auto assembly. You can designate a given edit as the initial edit, and automatically record edits with higher edit numbers. You can also skip edits which need not be recorded.

For more information about the EDL, see Chapter 7.

To conduct an auto assemble edit, proceed as follows.



Auto assemble edit

1 If any of the PGM MODE, EDIT NO. or SNAPSHOT buttons in the EDIT PGM section are not lit, press them, turning them on.

2 Designate an initial edit by pressing the '+' and '–' buttons until its number appears in the edit number display.
- If you want to record all edits after the initial edit, proceed to step **5**.
- If you want to skip a certain edit, proceed to step **3**.

3 Using the '+' and '–' buttons, display the number of the edit which you want to skip in the edit number display.

4 Press the DIS/ENA button.
The leftmost digit in the edit number display changes to a minus sign (–).[1)]
To skip more edits, return to step **3**.

5 Press the AUTO ASM (=SHIFT + AUTO EDIT/END) button in the AUTO CONTROL section.
Recording begins automatically from the initial edit specified in step **2**.

To halt auto assembly
Press the ALL STOP button.
All VCRs stop, and the unit leaves auto assemble mode.

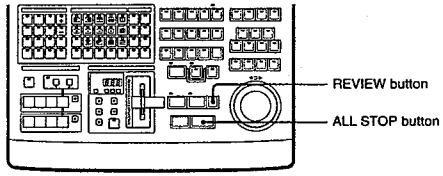
1) The edit remains in the EDL, even if a minus sign is displayed before its edit number. Pressing the DIS/ENA button once more removes the minus sign and cancels the designation.

Reviewing the Edit

After executing the edit, you can conduct a review in order to check the signals which have been recorded on the master tape.
During a review, master tape playback is displayed on the recorder monitor. If you press the SOURCE button in the MONITOR section, turning it on, and select the recorder by pressing the R-VTR button in the SOURCE section, the same signals are displayed on the main monitor.

Conducting a review

To conduct a review, press the REVIEW button in the AUTO CONTROL section, turning it on.
Settings registered in the EDL as a result of edit execution are recalled to the control panel, and the edit is played back from the preroll point to the postroll point.
When the review ends, the recorder is rewound to the OUT point, where it stops.



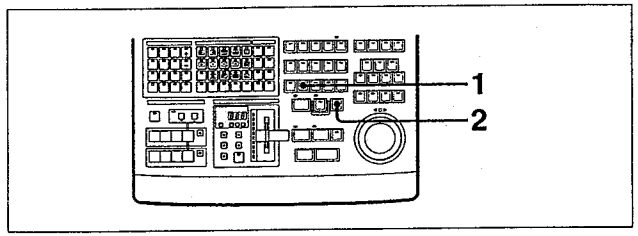
Conducting a review

To stop a review

Press the ALL STOP button.
The REVIEW button goes out, and the recorder stops.

To review near the OUT point only

Instead of reviewing the entire edit, from preroll point to postroll point, you can review only the vicinity of the OUT point.
Proceed as follows.



Reviewing near the OUT point only

1 Press the OUT button in the AUTO CONTROL section, turning it on.

2 Press the REVIEW button.
The most recently registered edit is recalled from the EDL, and the master tape is played back at normal speed near the OUT point only.

To review effect start points

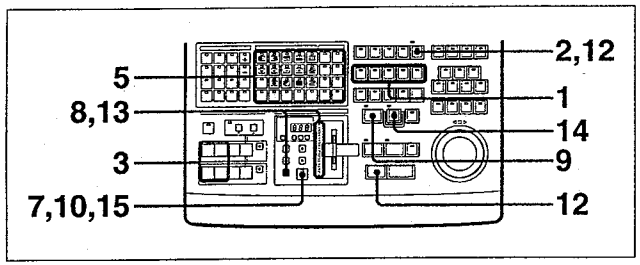
After pressing the REVIEW button to begin the review, press it once more.
The recorder begins fast forward playback, and returns to normal speed at a point slightly before the effect start point only.

1-69

On the Fly Editing With Two Players—Sync Roll Editing

In normal A/B roll editing, player 1 is started as the A-bus source, and player 2 started as the B-bus source when player 1 nears its OUT point. In another technique, called sync roll editing, both players are started simultaneously, allowing you to switch manually from bus A to bus B and back again when the desired scenes appear. This can be covenient when, for example, you are editing shots of the same event taken by two cameras from different angles.
To apply dissolves and wipes while switching between buses, use the AUTO TRANS/PAUSE button in the EFFECT TRANSITION section. To cut between the buses, use the CUT button.
Sync roll previews are automatically saved in preview memory.

The following example shows how to use the AUTO TRANS/PAUSE button.



Sync roll editing

1 Select insert or assemble mode.

2 Press the SYNC ROLL button in the EDIT TYPE section, turning it on.

3 In the VIDEO INPUT SELECT section, select source players for bus A and bus B.

4 Set the edit points (*see page 5-13*).
If you selected assemble mode in step **1**, you do not need to set the recorder OUT point.

5 Select the transition effect using the buttons in the WIPE PATTERN and MIX/EFFECT sections.

6 Set the effect transition time (*see page 5-58*).

7 If the AUTO TRANS/PAUSE button in the EFFECT TRANSITION section is not lit, press it, turning it on.

8 • To preview the edit while viewing the monitor, press the PREVIEW button and proceed to step **9**.
• To execute the edit without a preview, proceed to step **11**.

9 After passing the edit IN point [1] press the AUTO TRANS/PAUSE button at any scene to begin the effect transition.
You can switch between buses any number of times during the preview.

10 • If you are satisfied with the results of the preview, proceed to step **11**.
• If you are not satisfied, change settings (if necessary) and go back to step **7**.

11 Press the AUTO EDIT/END button to execute the edit.

12 After passing the edit IN point [1], press the AUTO TRANS/PAUSE button to switch buses.
You can switch buses any number of times before reaching the recorder OUT point.
At the recorder OUT point, the edit ends automatically. The edit data for the switches performed is registered in the EDL.

To end a sync roll edit when the recorder OUT point is not set
Press the AUTO EDIT/END or ALL STOP button.
All VCRs stop, and the unit leaves sync roll mode. Depending on the button pressed, time code for the point where the button was pressed may or may not be registered as an OUT point in the EDL.
• If the AUTO EDIT/END button is pressed, an OUT point is registered in the EDL.
• If the ALL STOP button is pressed, an OUT point is not registered in the EDL.

1) Edit IN point: In split editing, either the video IN point or the audio IN point, whichever comes later.

Editing With Manual Special Effects

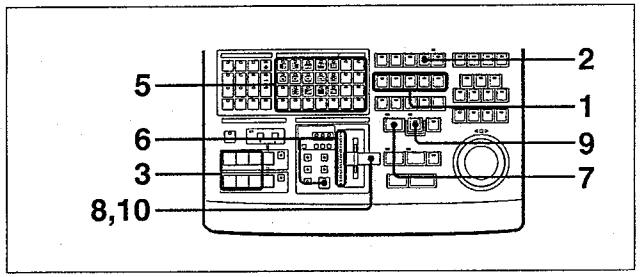
By using the fader lever to carry out dissolves and wipes manually, you can vary the transition speed, stop midway through the transition, and achieve other special effects. You can also switch back to A-bus video after a transition to B-bus video. Effects created in this way are not registered in the EDL, even if you execute an edit.

Note

Instead of using the fader lever, you can also use the AUTO TRANS/PAUSE button or the CUT button, which switches instantly between A-bus and B-bus signals.

For details on using the AUTO TRANS/PAUSE button, see "Auto Transition Effects" (page 6-6).

The following example shows how to use the fader lever to create special effects.



Using the fader lever for special effects

1 Select insert or assemble mode.

2 Press the MAN button in the EDIT TYPE section, turning it on.

3 In the VIDEO INPUT SELECT section, select source players for bus A and bus B.

4 Set the edit points (*see page 5-13*).
If you selected assemble mode in step **1**, you do not need to set the recorder OUT point.

5 Select the transition effect using the buttons in the WIPE PATTERN and MIX/EFFECT sections.

6 Check the FROM and TO sources.
Only one transition indicator should be lit—the topmost indicator on the A side if the transition moves from bus A to bus B, or the lowermost indicator on the B side if it moves in the opposite direction.

7 • To rehearse the transition while viewing playback on the monitor, press the PREVIEW button and proceed to step **8**.
• If a preview is not necessary, proceed to step **9**.

8 A preview starts as soon as you press the PREVIEW button. When it reaches the edit IN point manipulate the fader lever and observe the changes in the picture.
You can switch between the sources any number of times before reaching the recorder OUT point.
• If satisfied with the results of the preview, check the FROM and TO sources and proceed to step **9**.
• To redo the preview, make the necessary adjustments and return to step **6**.

9 Press the AUTO EDIT/END button to execute the edit.

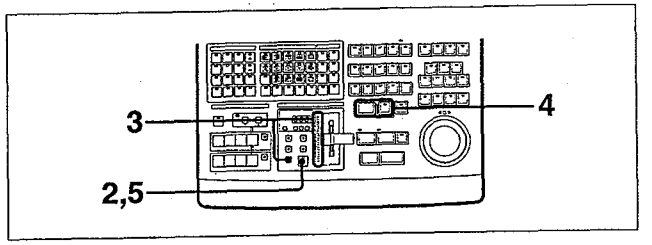
10 Use the fader lever to switch between buses at the desired scenes. You can switch any number of times before reaching the recorder OUT point.

To end a manual effects edit when the recorder OUT point is not set

Press the AUTO EDIT/END or ALL STOP button.
All VCRs stop, and the unit leaves manual effects mode.
• If the AUTO EDIT/END button is pressed, the edit data (except for the effect type and transition time) is registered in the EDL.
• If the ALL STOP button is pressed, nothing is registered in the EDL.

Auto Transition Effects

Instead of using the fader lever, you can also use the AUTO TRANS/PAUSE button for manual transition effects. After carrying out steps **1** to **5** in the procedure on page 6-4, proceed as follows.



Creating effects in auto transition mode

1 Set the effect transition time (*see page 5-58*).

2 If the AUTO TRANS/PAUSE button is not lit, press it, turning it on.

3 Check the FROM and TO sources.
Only one transition indicator should be lit, on the A or B side.

4 Press the PREVIEW or AUTO EDIT/END button to put the unit into preview or edit execution mode.

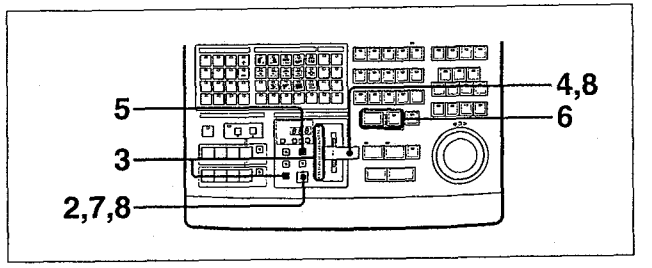
5 After passing the edit IN point, press the lit AUTO TRANS/PAUSE button.
The auto transition begins, switching from one bus to the other. You can switch between buses any number of times before reaching the recorder OUT point.

To suspend an auto transition

After starting the transition by pressing the AUTO TRANS/PAUSE button, press it again at the desired position. The button changes from lit to flashing.
To resume the transition, press the AUTO TRANS/PAUSE button once more. The button changes from flashing to lit.

To stop an auto transition automatically at the desired position

By manipulating the fader lever, you can decide the position where you want to halt an auto transition. After carrying out steps **1** to **5** on page 6-4, proceed as follows.



Stopping an auto transition automatically at the desired position

1 Set the effect transition time (*see page 5-58*).

2 If the AUTO TRANS/PAUSE button is not lit, press it, turning it on.

3 Check the FROM and TO sources.
Only one transition indicator should be lit, on the A or B side.

4 Move the fader lever to the position at which you wish to stop.

5 Press the LEVER PAUSE button, turning it on.

6 Press the PREVIEW or AUTO EDIT/END button to put the unit into preview or edit execution mode.

7 After passing the edit IN point, press the lit AUTO TRANS/PAUSE button.
The auto transition begins, and stops automatically at the fader lever position. The AUTO TRANS/PAUSE button starts flashing.

8 To resume the transition, press the AUTO TRANS/PAUSE button again or move the fader lever.
If you move the fader lever, the unit leaves auto transition mode.

Setting Independent Video and Audio IN Points—Split Editing

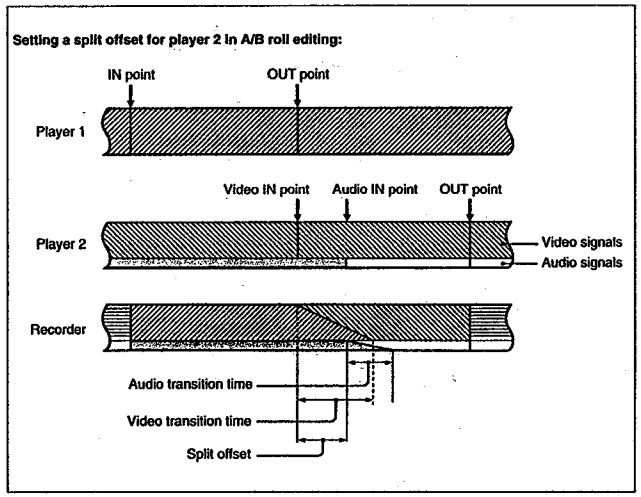
Editing with independent video and audio IN points is called split editing. You can set split offsets separately for all the connected VCRs (player 1, player 2, and recorder).

The following restrictions apply in split editing.

- You must select insert mode as the edit mode to perform split editing. Moreover, it is not possible to set different split offsets for audio channels 1 and 2. The split offset is always the same for channel 1 and channel 2.
- The maximum split offset between the video IN point and the audio IN point is:
  59 seconds and 29 frames (FXE-100) or
  59 seconds and 24 frames (FXE-100P).
- Independent OUT points cannot be set for audio and video.
- If you set split offsets for the players and the recorder, the recorder split offset takes priority.

Relationship between transition times and split offset

In split editing, you can set separate transition times for audio and video.
In this case, the relationship between the transition times and the split offset is as shown below.

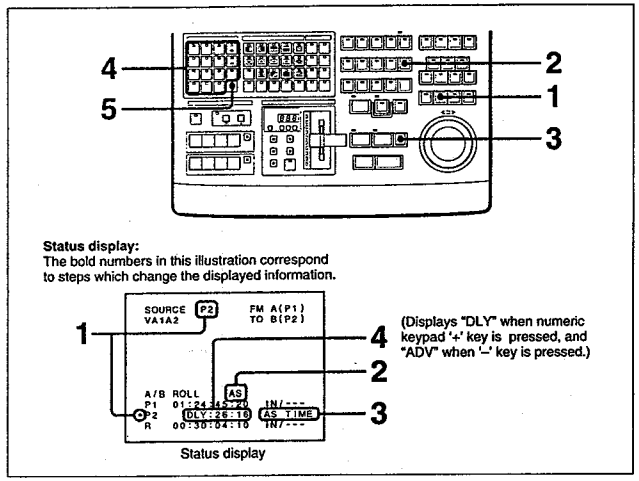


Relationship between transition times and split offset

Setting the split offset

The audio IN point is calculated automatically, using the video IN point and the split offset.
For example, the procedure below shows how to set a split offset for player 2 when the following settings have been made.

- **Insert edit channels:** Video, audio 1, audio 2
- **Edit type:** A/B roll



Splitting the video and audio IN points for player 2

1 In the SOURCE section, select the VCR for which you want to split the audio and video IN points (in this example, player 2).

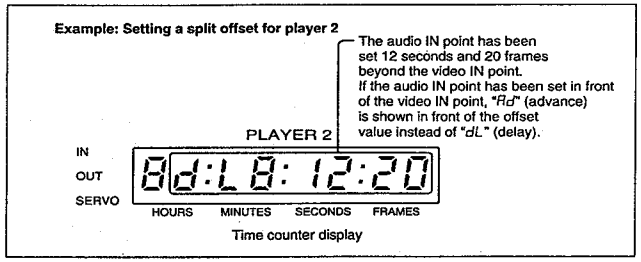
2 Press the AUDIO SPLIT button in the EDIT MODE section.
The button begins to flash and the unit enters split edit mode.

3 Press the SET DUR button in the TIME MARK section.
The button begins to flash and the numeric keypad is enabled.

4 Enter the split offset (seconds:frames) using the numeric keypad.
Press the '+' key to set the audio IN point beyond the video IN point, and the '–' key to set it in front of the video IN point. You can enter up to 4 digits.
If the most significant digits are '0', they do not need to be entered again.

(Continued)

5 Press the ENT key in the numeric keypad.
The value entered in step **4** is confirmed as the split offset, and the unit leaves numeric keypad mode.
The split offset is shown in the appropriate time counter display, as follows.



To display the split offset
You can display the split offset at any time by selecting the VCR in the SOURCE section, and then pressing the SPLIT (=SHIFT + AUDIO SPLIT) button in the EDIT MODE section. The split offset is displayed in the main monitor's status display, and in the time counter display of the selected VCR.

To change the split offset
To change the split offset, put the unit into split mode, press the SET DUR button in the TIME MARK section and enter the new offset with the keys in the numeric keypad. In this case, the '+' and '–' keys are used to specify "DLY" and "ADV", respectively. They do not increment or decrement the numeric value.

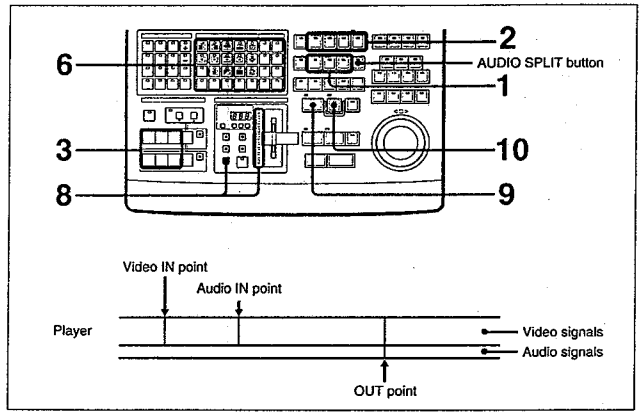
To cancel a split offset
Display the split offset, then press the CLEAR button in the AUTO CONTROL section.

To set the video IN point while the AUDIO SPLIT button is flashing
You can set video edit points in the normal way, by pressing the MARK IN and MARK OUT buttons (but not the SET DUR button) in the TIME MARK section.

To exit split edit mode
Press the flashing AUDIO SPLIT button, turning it off.

Executing a split edit

The following example shows how to execute a split edit using player signals on either the A bus or B bus.



Executing a split edit

1 Select insert mode in the EDIT MODE section by pressing insert buttons (V, A1, A2) for the desired channels, turning them on. If a button is flashing, press it twice.

2 Select the edit type in the EDIT TYPE section.

3 In the VIDEO INPUT SELECT section, select the source.

4 Set the edit points (*see page 5-13*).

5 Set the split offset between the audio IN point and the video IN point for the selected player, on either the A bus or the B bus.
For details, see "Setting the split offset" (page 6-9).

6 Select the transition effect using the buttons in the WIPE PATTERN and MIX/EFFECT sections.

7 Set the effect transition time (*see page 5-58*).

8 Check the FROM and TO sources.

9 Preview the edit and change the settings as necessary.
When you press the PREVIEW button, the AUDIO SPLIT button stops flashing and lights.

(Continued)

10 Execute the edit.
The AUDIO SPLIT button stops flashing and lights when you press the AUTO EDIT/END button, and goes out when the edit ends.

Note

When a split edit is executed, the split offset is saved in EDL memory as part of the information relating to that edit. However, it is not carried over to new edits.

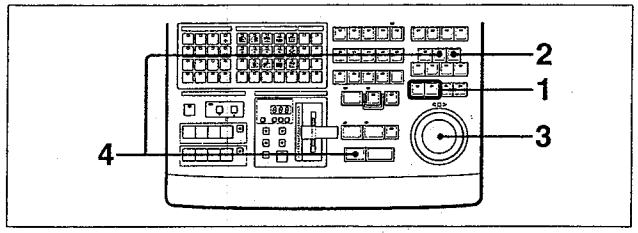
1-75

Editing Variable-Speed Playback—DMC Editing

If your player VCR supports Dynamic Tracking (DT) playback, you can edit noiseless, variable-speed video playback. This kind of editing is called Dynamic Motion Control (DMC). In DMC editing, it is necessary to set the initial playback speed, or speed of the player at the point where it crosses the IN point.

Setting the initial speed for DT playback

Proceed as follows to set the initial speed for DT playback.



Setting the initial speed for DT playback

1 Select the DT player using the buttons in the SOURCE section.

2 Press the DMC button in the MANUAL CONTROL section, turning it on.
The specified player enters DMC mode.

3 Press the search dial to put it into the shuttle mode (high) position, and rotate to control the playback speed. Stop rotating the dial when playback reaches the desired speed.

Note

This unit can control DT playback at speeds ranging from –1 to +3 times normal speed. However, the actual speeds produced may vary, depending on the particular VCR.

4 Press the MK-SPD (=SHIFT + SPEED) button in the MANUAL CONTROL section.
The speed of DT playback at the time when you pressed the button is stored in the unit's memory.

To cancel DMC mode

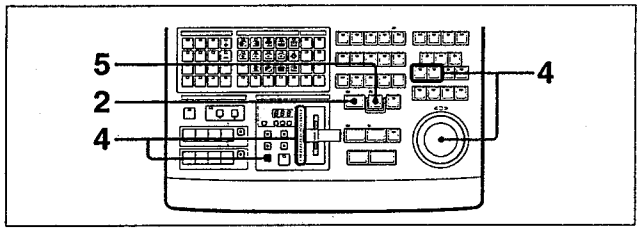
Press the lit DMC button, turning it off.

To delete an initial speed from memory

Once you have set a VCR's initial playback speed and used it in editing, that player always begins DT playback at the selected speed. If you want to begin at normal speed, it will be necessary to delete the initial speed from memory.
To delete the initial speed, select the player with the appropriate button in the SOURCE section, press the SPEED button in the MANUAL CONTROL section, and then press the CLEAR button in the AUTO CONTROL section.

Performing a DMC edit

To perform a DMC edit, first initialize the DT playback speed, then proceed as follows.
After a preview or edit passes the IN point, you can control the DT playback speed manually.



DMC editing

1 Follow the standard procedures to select the edit mode and so on.

2 Check the FROM and TO sources.

3
- If you want to execute the edit without a preview, proceed to step **5**.
- If you want to preview the edit first, press the PREVIEW button.
  The button lights and a preview begins. When a player programmed for DT playback reaches the IN point, the DMC button begins flashing, and DT playback begins at the specified initial speed.
  If you also want to control the playback speed during the preview, proceed to step **4**.
  If you do not want to control the playback speed, wait for the preview to finish and then proceed to step **5**.

4 To control the playback speed manually, press to put the search dial into shuttle mode and rotate it.

Notes

- The search dial does not affect playback speed until it reaches the DT initial speed position.
- Instead of using the search dial, you can also press the PLAY button in the MANUAL CONTROL section for playback at +1 times normal speed, or press the STILL button for still playback.

5 Press the AUTO EDIT/END button to execute the edit.
Just as during a preview, you can use the search dial and PLAY button to control playback speed beyond the IN point, and press the STILL button for still playback.
Note that manually controlled playback speeds are not saved in the EDL, although the DT initial speed is saved.

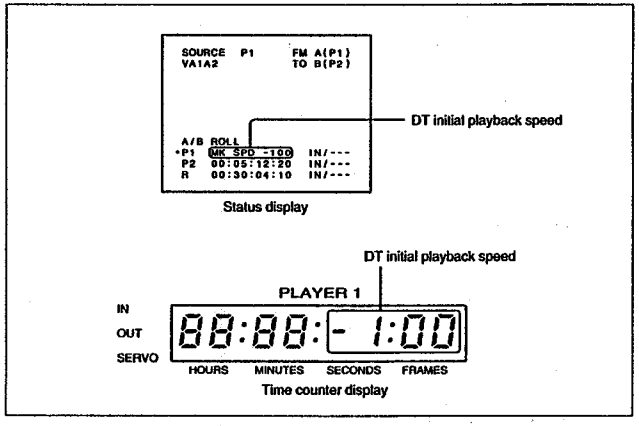
6 Press the AUTO EDIT/END button to execute the edit.
Just as during a preview, you can use the search dial and PLAY button to control playback speed beyond the IN point, and press the STILL button for still playback.
Note that manually controlled playback speeds are not saved in the EDL, although the DT initial speed is saved.

To change the initial speed during a preview

After selecting the desired speed in step **5**, press the SPEED button to display the current DT playback speed and then press the MK-SPD (=SHIFT + SPEED) button.

To check the initial DT playback speed

Select the player with the appropriate button in the SOURCE section, then press the SPEED button in the MANUAL CONTROL section, turning it on. The initial DT playback speed is displayed in the main monitor's status display and in the appropriate time counter display as a percentage of normal speed. For example, if the initial speed for player 1 on bus A has been set to –1 times normal speed, the following information is displayed.



Checking DT initial playback speed

Automatic calculation of edit points when a DT initial speed is set

Even if you have set an initial DT playback speed, the unit calculates edit points and durations in the same way as in normal editing, regardless of the initial speed.

For details about automatic calculation of edit points and durations, see "Relation Between IN/OUT Points and Duration" (page 5-17).

Editing With Fade In and Fade Out

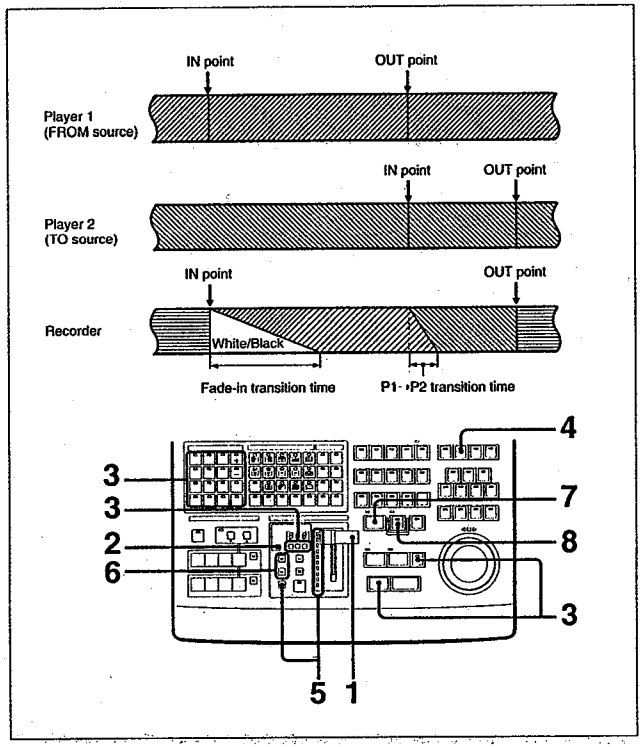
You can fade player video in to or out from a black or white background. The black or white background is output from the TO source bus.

Notes

- The fade-in and fade-out effects cannot be used when any of the key selection buttons (LUMINA KEY, CHROMA KEY, P IN P) are lit.
- The fader lever cannot be used for fade-in or fade-out effects.
- Fade-in from the edit IN point cannot be used during sync roll editing.
- If you perform a fade-in during A-roll editing, the black or white background is output on bus B, overriding the A-roll effect.

Fade In

Proceed as follows to use the fade-in effect in normal A/B roll editing. This example assumes that player 1 has been selected as the A-bus source, and player 2 as the B-bus source.



Fade-in A/B roll editing

1 Push the fader lever all the way up to the A side, so that only the topmost transition indicator is lit.

2 Press the VIDEO/AUDIO/FADE button in the EFFECT TRANSITION section, lighting the FADE indicator above the button.
The fade transition time may now be set.

3 Set the fade transition time using the TRANS RATE buttons in the EFFECT TRANSITION section, or the SET TRANS (=SHIFT + SET DUR) in the TIME MARK section button *(see page 5-58)*.

Note

The fade transition time must be shorter than the duration for player 1. If it is not shorter, an error code is displayed in the appropriate time counter display when you press the PREVIEW or AUTO EDIT/END button, and the preview or edit is not executed. The edit is executed if the fade transition time and player 1 duration are equal.

4 Press the PGM button in the MONITOR section.
The main monitor displays still playback from player 1.

5 Check the FROM and TO sources.

6 To fade the playback from player 1 in from a white background, press the WHITE FADE button in the EFFECT TRANSITION section. Press the BLACK FADE button to fade in from a black background.
The BKGD button in the TO source row of the VIDEO INPUT SELECT section (in this example the B-BUS row) lights automatically, and the picture changes gradually to a white or black background, using the same transition time which was set in step **3**. The lit WHITE FADE or BLACK FADE button begins to flash.

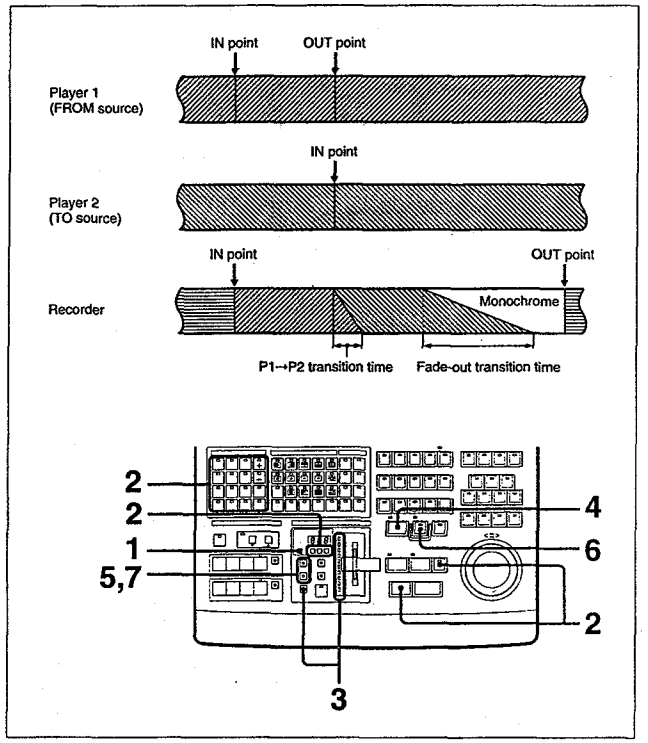
7 Preview the edit and change the settings as necessary.
The WHITE FADE or BLACK FADE button flashes during the preview and goes out at the end of the transition (when player 1 video has completely replaced the background).

8 Execute the edit.
During the edit, the flashing WHITE FADE or BLACK FADE button goes out at the end of the fade-in transition.

1-77

Fade Out

You can perform a fade out in A/B roll editing at any point after the transition from the FROM source to the TO source. The following example shows how to fade the TO source playback out to a black or white background after an A/B roll transition. Make the normal edit point settings for an A/B roll edit (but do not set the OUT point for the TO source), then proceed as follows. This example assumes that player 1 has been selected as the A-bus source, and player 2 as the B-bus source.



Fade-out in A/B roll editing

1 Press the VIDEO/AUDIO/FADE button in the EFFECT TRANSITION section, lighting the FADE indicator above the button.
The fade transition time may now be set.

2 Set the fade transition time using the TRANS RATE buttons in the EFFECT TRANSITION section, or the SET TRANS (=SHIFT + SET DUR) button in the TIME MARK section *(see page 5-58)*.

3 Check the FROM and TO sources.

4
- If you want to preview the edit, press the PREVIEW button and proceed to step **5**.
- To execute the edit without a preview, proceed to step **6**.

5 When the preview starts, wait until the end of the transition to the TO source, then press the WHITE FADE or BLACK FADE button in the EFFECT TRANSITION section.
At the end of the fade-out transition (when player 2 video has been completely replaced by the background), the lit WHITE FADE or BLACK FADE button starts flashing.
- If satisfied with the preview, proceed to step **6**.
- If not satisfied, make the necessary changes and redo the preview.

6 Press the AUTO EDIT/END button to execute the edit.

7 After the A/B roll transition, when player 2 video has completely replaced player 1 video, press the WHITE FADE or BLACK FADE button at the desired scene, turning it on.
- After the fade-out transition (when the white or black background has completely replaced player 2 playback), the lit WHITE FADE or BLACK FADE button starts flashing.
- When the recorder finishes recording, the unit leaves fade mode and the flashing WHITE FADE or BLACK FADE button goes out. The monitor displays still playback from player 2.

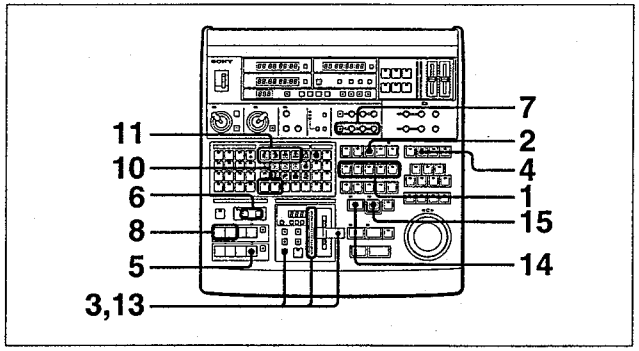
1-78

Using Color Backgrounds

The unit's internal color background generator can be used to generate effective backgrounds for use with mixes, wipes and so on.
This section shows how to slide player video into a color background, and how to switch to a color background by sliding player video out.

Slide In and Slide Out Using a Color Background

The following example shows how to slide in or slide out video from a source player using a selected background color.



Slide in and slide out using a color background

1 Select the edit mode in the EDIT MODE section.

2 Press the A/B ROLL button in the EDIT TYPE section, turning it on.

3 Select the B bus by pressing the CUT button in the EFFECT TRANSITION section, or by pulling the fader lever all the way down to the B side. Check to be sure that only the lowermost transition indicator on the B side is lit.

4 Press the PGM button in the MONITOR section, turning it on.

5 In the VIDEO INPUT SELECT section, press the BKGD button in the B-BUS row, turning it on, to select the built-in color background generator as the source for bus B.
The COLOR BACKGROUND indicator lights, and a background color is output to the monitor.

6 Use the background color selection buttons (▼ and ▲) to select one of the 25 background colors.

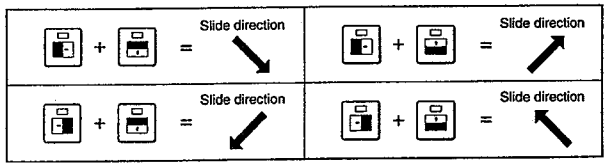
7 Adjust the hue, luminance and chrominance of the background color by pressing the B-BUS button in the VIDEO LEVEL & HUE section and then rotating the three knobs.

8 Press the P1 or P2 button in the A-BUS row of the VIDEO INPUT SELECT section, turning it on, to select player 1 or player 2 as the source for bus A.

9 Set the edit points (*see page 5-13*).
For bus B, enter a duration by pressing the AUX button in the SOURCE section, turning it on, and then pressing the SET DUR button and using the numeric keypad.

10 Press the SLIDE IN button in the WIPE PATTERN section to select a slide in effect. Press the SLIDE OUT button to select slide out.

11 Use the horizontal and vertical wipe buttons to set the direction.
To slide in at a slant, press one each of the horizontal and vertical wipe buttons, turning them on.



12 Set the slide-in or slide-out transition time (*see page 5-58*).

13 Check the FROM and TO sources.
- For a slide in, only the lowermost transition indicator on side B should be lit.
- For a slide out, only the topmost transition indicatoron side A should be lit.

If other indicators are lit, press the CUT button in the EFFECT TRANSITION section to switch buses.

14 Preview the edit and change the settings as necessary.

15 Execute the edit.

1-79

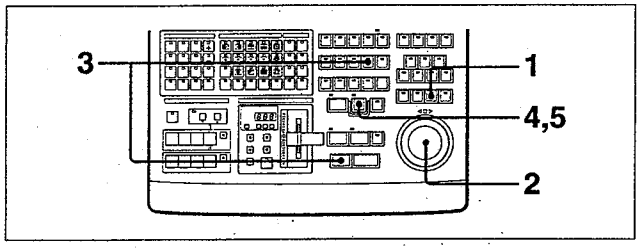
Recording Time Code—Time Code Insert

To perform time code editing [1] with a tape containing recorded video or audio but no recorded time code, it is necessary to record consecutive time code on the tape in advance, at least for the segment you wish to edit. Adding time code to a pre-recorded tape in this way is called time code insert.
Even if time code is already recorded on the tape, you may want to change the time code values. This is also done by executing a time code insert with the desired preset value. If you do not set a preset value, time code will be inserted so as to form a continuous sequence with the time code already recorded on the tape.

Notes

- Time code cannot be recorded correctly on a tape or a section of tape on which nothing at all has been recorded.
- When inserting time code into an already recorded tape, the tape should normally be loaded into the recorder VCR. This prevents misoperations such as selecting a player VCR containing a tape with time code that should not be overwritten.

To perform a time code insert, proceed as follows.



Time code insert

1 Insert the tape onto which you want to record time codes into a VCR (normally the recorder), and select that VCR in the SOURCE section.

2 Using the search dial, search for the desired scene (the time code insert IN point).
If time codes are recorded before the IN point, and you want to insert time codes so as to form a continuous sequence, rewind the tape to the section containing the already recorded time codes.

Note

Before recording time code, check to be sure that signals have already been recorded on the tape, at least between the preroll point and the IN point.

1) Time code editing: Editing which uses time code to determine edit point locations, as opposed to editing which uses CTL codes.

3 Press the TC (=SHIFT + A2) button in the EDIT MODE section.

4 Press the AUTO EDIT/END button in the AUTO CONTROL section.
The button begins to flash, and the tape is rewound from the IN point to the preroll point. It stops there, and begins to run in the forward direction. Time code recording begins when the tape nears the IN point. When the IN point is passed, the AUTO EDIT/END button stops flashing and lights.
During time code recording, the monitor displays the recorded video.

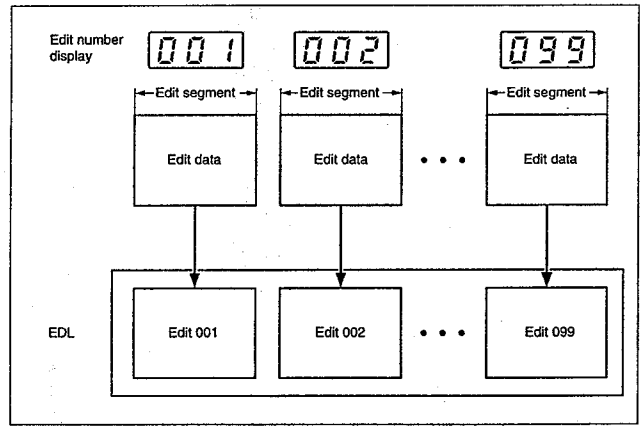
5 Press the AUTO EDIT/END button at the point where you wish to end the time code recording.

To preset the time code for an IN point

Preset the time code for an IN point just as you would set an edit point, by pressing the MARK IN button in the TIME MARK section, or by pressing the SET IN (=SHIFT + MARK IN) button and entering the time code value with the numeric keypad.

About the EDL

The edit decision list (EDL) is stored in the unit's internal memory. As shown below, it contains a list of edits numbered from 001 to 099. Each edit contains all of the settings needed to carry out an automatic edit.
After registering an edit in the EDL, you can recall it whenever you need it again. You can revise a recalled edit and save the revised version. The current edit is displayed as a three-digit number in the edit number display, located in the EDIT PGM section of the control panel.



Structure of the EDL

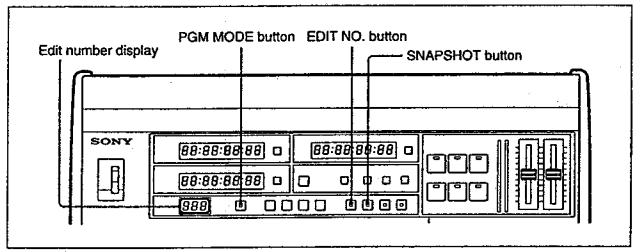
When performing an EDL operation

The PGM MODE button and the EDIT NO. button in the EDIT PGM section should both be lit. If they are not lit, press them so that they light. While the PGM MODE button is lit, the edit number is shown in the edit number display.

For details about the display format, see "Edit number display format" below.

If you want to include snapshots in the operation, press the SNAPSHOT button so that it lights also.

See page 7-4 for more information about snapshots.



PGM MODE button, EDIT NO. button, SNAPSHOT button

Edit number display format

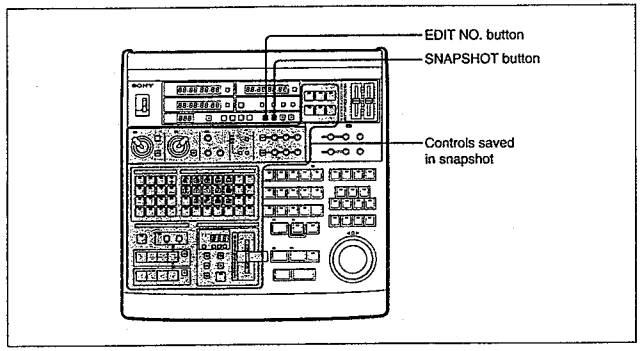
While the PGM MODE button is lit, the edit number is displayed in the following format.

EDIT PGM 003	Registered edits are displayed as three-digit numbers.
EDIT PGM n04	New edits, and edits deleted from the EDL, are displayed as two-digit numbers preceded by "n" (new). *See page 7-6 for more information about new edits, and page 7-9 for more information about deleted edits.*
EDIT PGM -02	Skipped edits are displayed as two-digit numbers preceded by a minus sign (–). *See page 7-5 for more information about skipped edits.*

1-81

About Snapshots

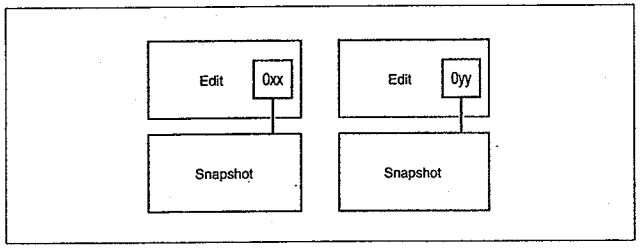
When the unit saves an edit, it can also save the settings of the controls in the AUDIO INPUT SELECT section and the video switcher/special effects section. This data is called a snapshot. Whenever you recall a snapshot from memory, controls in these sections are instantly restored to their settings at the time when the snapshot was taken.



Controls saved in a snapshot

Snapshot numbers

Snapshots are managed using the same numbers as edits. In other words, the same number is shared by one edit and one snapshot.



Relation between edits and snapshots

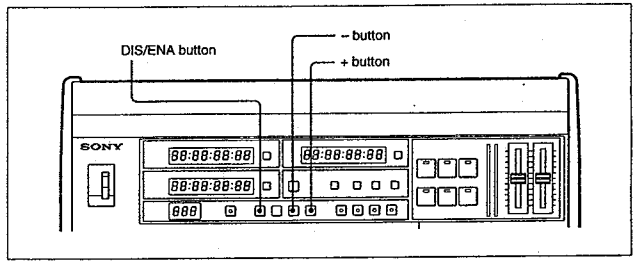
To perform an operation using snapshots only

If the EDIT NO. and SNAPSHOT buttons in the EDIT PGM section are both lit when you perform an EDL operation, the operation affects edits as well as snapshots. If you want to perform an operation using snapshots only, press the EDIT NO. button, turning it off. You can register a snapshot, recall it, or perform any other EDL operation just as you would for an edit.

Using the EDL

The following section describes how to register edits in the EDL, how to recall them, how to revise them, and so forth.

Selecting an edit for an EDL operation



Selecting an edit for an EDL operation

Except when registering a new edit, you will always need to select the edit to work with in an EDL operation.
To select an edit, press the '+' and '–' buttons in the EDIT PGM section until the number of the edit you wish to use appears in the edit number display.

+ button: The displayed number is incremented by 1 each time you press the button. If the number is 099, it changes to 001. Pressing this button together with the SHIFT button increments the displayed number by 10.

– button: The displayed number is decremented by 1 each time you press the button. If the number is 001, it changes to 099. Pressing this button together with the SHIFT button decrements the displayed number by 10.

Note

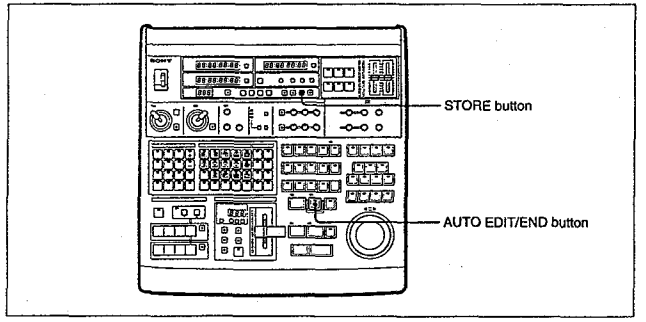
The EDIT NO. button lights if an edit has been registered for the displayed number, and goes out if not.
The SNAPSHOT button lights if a snapshot has been registered, and goes out if not.

To skip edits during an EDL operation

When you perform an auto assembly operation involving multiple edits, or when you transfer data to and from the EDL, you can exclude specific edits from the operation.
To skip a specific edit, select that edit and press the DIS/ENA button.
The leftmost digit in the edit number display changes from '0' to a minus sign (–).
To undo the skip designation, press the DIS/ENA button once more. Note that the edit remains in EDL memory even if a minus sign is shown before its edit number.

Registering an Edit in the EDL

- After selecting the edit, press the AUTO EDIT/END button in the AUTO CONTROL section to execute an automatic edit. The edit is registered in the EDL.
- To register the edit without executing an automatic edit, set the edit points and so on, and then press the STORE button in the EDIT PGM section. The button lights, and the edit is registered.



Registering an edit

About new edits

When you register an edit in the EDL, the number shown in the edit number display is incremented and the unit is readied for a new edit. When displaying a new edit number, "∩" is shown in the leftmost column of the edit number display.

When the EDL becomes full

When n99 is displayed in the edit number display, it means that you have already registered 98 edits and that the EDL is almost full. After you register edit n99, the number in the display changes as follows, depending upon the the setting of item 309 OVERFLOWED EDIT in the setup menu.

If item 309 is set to INHIBITED: The number changes from n99 to 099. In this state, the AUTO EDIT/END and STORE buttons are disabled, and no new edits can be registered. If you press one of these buttons, an error code is displayed in the time counter display.
Setup menu item 309 is factory preset to INHIBITED.

If item 309 is set to OVERWRITE: The number changes to 001. In this state, when you press the AUTO EDIT/END or STORE button, the edit previously registered under number 001 is overwritten and the display changes to 002.

For details, see Chapter 8.

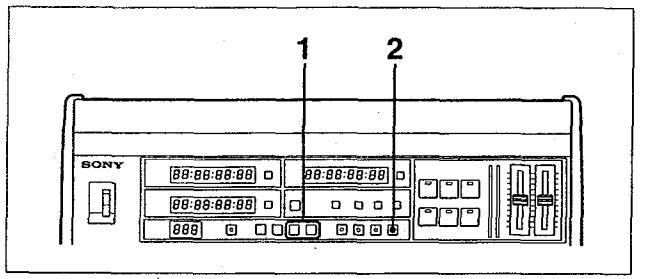
How long are edits held in internal memory?

Edits remain in internal memory for about one week after you turn the unit off. If you want to save edits permanently, transfer them to a personal computer or other external equipment.

For details, see "Transferring Edits To and From External Equipment" (page 7-11).

Recalling Edits from the EDL

You can recall edits from the EDL in order to return the control panel to the state it was in at the time the edit was saved. Proceed as follows.



Recalling an edit

1 Press the '+' and '–' buttons to select the edit.

2 Press the RECALL button.
The RECALL button lights. The various other buttons on the control panel light or go out, according to the settings contained in the selected edit.

Revising and Deleting Edits

To revise an edit

To revise an edit, first recall it from the EDL, then use the normal procedures to adjust the settings.

For more information about how to adjust the settings, see the following sections:
- *Edit modes: Selecting an Edit Mode (page 5-3).*
- *Sources: Selecting Video and Audio Signals (page 4-7).*
- *Edit points: Changing edit points (page 5-21).*
- *Special effects: Selecting Special Effects (page 5-25).*
- *Transition times: Setting the Transition Time (page 5-58).*

To save an edit after recalling and revising it

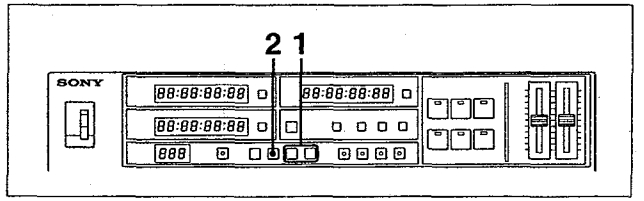
Press the AUTO EDIT/END button to execute an automatic edit, or press the STORE button.

To undo changes after previewing a recalled edit

Press the LAST ED (= SHIFT + GO TO) button in the AUTO CONTROL section.

To delete an edit

When you have no more use for an edit, proceed as follows to delete it from the EDL.



Deleting an edit

1 Press the '+' and '–' buttons to select the edit.

2 Press the DEL button.
The edit is deleted from the EDL and "∩" appears in the leftmost column of the edit number display.

Note

Deletions are permanent. Deleted edits cannot be restored.

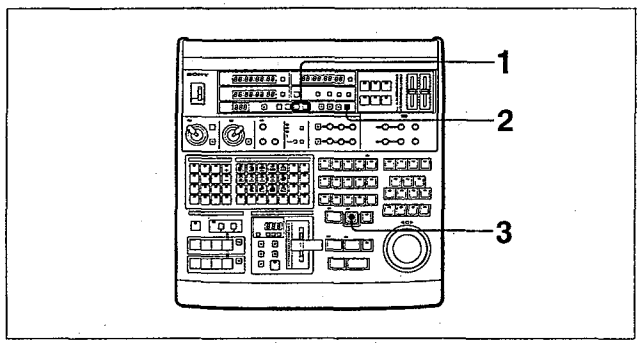
To delete all of the edits registered in the EDL

Under setup menu item 309 OVERFLOWED EDIT, select ALL CLEAN UP.

For details, see Chapter 8.

Using Registered Edits in Automatic Editing

Proceed as follows to use an edit from the EDL in automatic editing.



Using a registered edit in automatic editing

1 Press the '+' and '–' buttons to select the edit.

2 Press the RECALL button to recall the specified edit to the control panel.

3 Press the AUTO EDIT/END button in the AUTO CONTROL section.
An automatic edit begins, using the edit shown in the edit number display.

Before pressing the AUTO EDIT/END button, you can also preview the edit and make any revisions that may be necessary.

For details, see "Revising and Deleting Edits" (page 7-8).

To execute automatic edits continuously

You can also perform continuous automatic editing (auto assembly) using edits registered in the EDL.

For details, see page 5-66.

Transferring Edits To and From External Equipment

You can connect external equipment such as a personal computer to this unit's EDL IN/OUT connector in order to transfer data to and from the EDL. Snapshots are included in the transfer if both the EDIT NO. and SNAPSHOT buttons in the EDIT PGM section are lit. Extinguish the SNAPSHOT button if you want to transfer edits only, and extinguish the EDIT NO. button if you want to transfer snapshots only.

About the EDL format

This unit uses the Sony format for EDL data.

Data transmission protocol

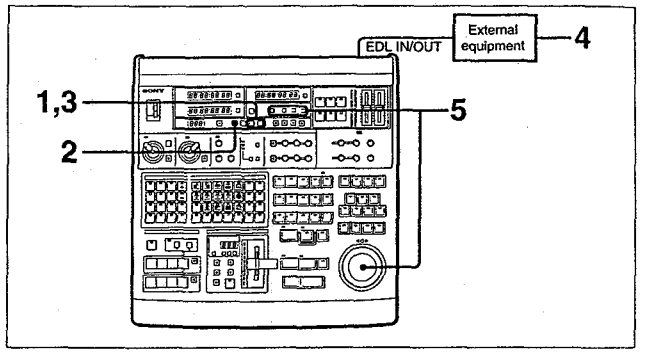
The data transmission protocol is factory preset as follows:

Stop bits: 1
Data bits: 8
Parity: None
Transmission speed: 9600 bps

1-85

To transfer EDL data to external equipment

Designate an arbitrary edit as the initial edit. The initial edit and all subsequent edits will be transferred to the external equipment, except for those edits which you specifically exclude from the transfer.



Transferring EDL data to external equipment

1 If you want to exclude an edit from the transfer, select the edit using the '+' and '–' buttons in the EDIT PGM section. Otherwise proceed to step **3**.

2 Press the DIS/ENA button.
The '0' in the leftmost column of the edit number display changes to '–'. If there are any more edits that you want to skip, return to step **1**.

3 Use the '+' and '–' buttons to designate the initial edit.

4 Make preparations on the external equipment side to receive the data.

5 Under setup menu item 310 EDL SWITCH, select DUMP and press the SET button. Next rotate the search dial to select GO, and press the SET button once more to begin the transmission.

For details, see Chapter 8.

To import EDL data from external equipment

Proceed as follows to import data into the EDL from external equipment.

1 Make preparations on the external equipment side to send the data.

2 Under setup menu item 310 EDL SWITCH, select LOAD and press the SET button. Next rotate the search dial to select GO, and press the SET button once more to begin the transmission.

For details, see Chapter 8.

Setup Menu Item Table

Settings for the following items can be changed with the setup menu.

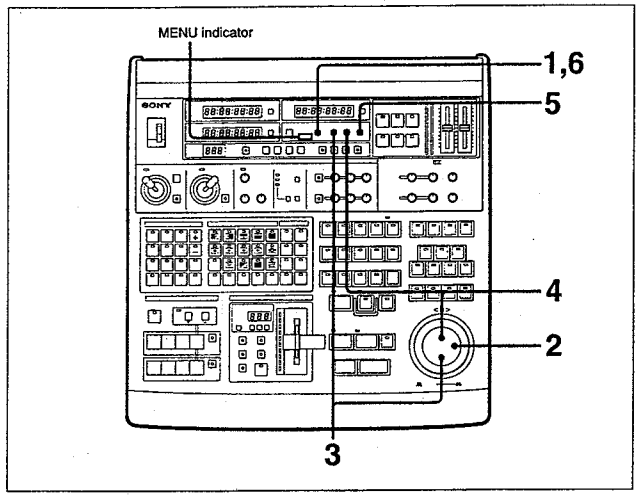
Item group	Number	Name	Settings
System Configuration	101	VIDEO INPUT SELECT	Composite or S-video input
	102	PREROLL TIME	Preroll time
	103	BEEP	Warning sound on/off
	104	EDIT REFERENCE	Time code type (LTC or CTL)
	105	USER BITS	User bits
	106	CTL COUNTER AUTO RESET	CTL counter auto reset mode
	107	A-ROLL MODE SELECT	Freeze error recovery
	108	A-ROLL TIMING OFFSET	Auto freeze timing
	109	TC JUMP	Require continuous time codes
	110[a]	FRAME CONTROL MODE	Drop-frame mode
	111	FF/REW MODE SELECT	High-speed tape transport mode selected with FF and REW buttons
Switcher	201	WIPE PATTERN	User button wipe patterns
	202	DIGITAL CNR LEVEL	Color noise removal level
	203	DIGITAL YNR LEVEL	Y (luminance) signal noise removal level
	204	DIGITAL VERTICAL ENHANCER	Vertical enhancer trigger level
	205	COLOR CORRECTION ADJUSTMENT WIDTH	Color correction joystick range
	206 (FXE-100)	VIDEO LEVEL & HUE ADJUSTMENT WIDTH	Video level & hue knob range
	206 (FXE-100P)	VIDEO LEVEL & CHROMA PHASE ADJUSTMENT WIDTH	Video level & chroma phase knob range
	207	AUDIO CROSS POINT LEVEL	A/B bus audio cross point
	208	TRANSITION PATH	Transition speed
	209	H CENTER ADJUSTMENT	Horizontal sync phase
External interface and EDL	301	SYNC GRADE	Sync precision level
	302	COLOR FRAMING	Color framing or time code
	303	SYNC GRADE DISPLAY	Sync grade status display on/off
	304	RS232C BAUD RATE	RS-232C transmission rate
	306	INPUT EFFECT AUTO SELECT	Buttons or fader lever
	307	GPI1 TIMING	GPI1 pulse timing
	308	GPI2 TIMING	GPI2 pulse timing
	309	OVERFLOWED EDIT	EDL memory full recovery
	310	EDL SWITCH	Upload/download EDL data
VCR device constants	401	DEVICE TYPE PLAYER1	Player 1 device constant
	402	DEVICE TYPE PLAYER2	Player 2 device constant
	403	DEVICE TYPE RECORDER	Recorder device constant

a) FXE-100 only

1-87

Using the Setup Menu

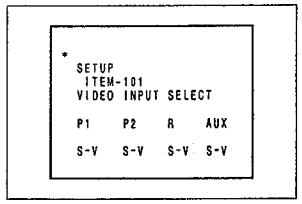
Proceed as follows to select menu items and change item settings.



Setup menu controls

1 Press the SCREEN button, turning on the MENU indicator.

2 Push the search dial in to select jog mode.
The most recently used setup menu item appears on the main monitor screen. The current setting flashes. If the item is set to the factory preset value, an asterisk (*) appears in the upper left corner of the screen.



(Continued)

3 While pressing the MENU button in the DIAL MENU section, rotate the search dial until the desired menu item appears on the screen.
Release the MENU button to select the item. The current setting flashes.
If the current item has more than one parameter item (for example P1, P2, R and AUX in menu item 101 VIDEO INPUT SELECT), rotate the search dial without pressing the MENU button until the desired parameter setting begins flashing.
"MENU" is displayed in the upper right corner of the screen while the MENU button is pressed.

4 While pressing the DATA button in the DIAL MENU section, rotate the search dial until the desired setting appears.
The setting flashes. "DATA" is displayed in the upper right corner of the screen while the DATA button is pressed.

5 Press the SET button.
The setting selected in step **4** is confirmed. "SET" is displayed in the upper right corner of the screen while the SET button is pressed.

6 Press the SCREEN button to extinguish the MENU indicator.

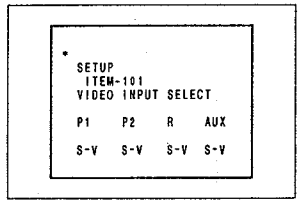
Setup Menu Items

Items marked with an asterisk (*) are set to the factory preset value.

System Configuration

101 VIDEO INPUT SELECT

Select the type of input signals for the VIDEO INPUT connectors. Rotate the search dial only to select composite video or S-video for player 1, player 2, the recorder and auxiliary source 1.

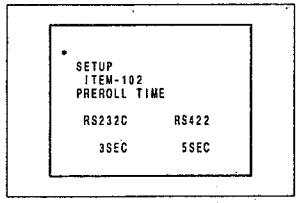


Settings

V	Composite video signals
*S-V	S-video signals

102 PREROLL TIME

Select the preroll time for the connected VCRs. Settings may be made separately for VCRs connected to the RS-232C and RS-422 connectors. Select RS232C or RS422 by rotating the search dial only.



Settings

RS-232C connector

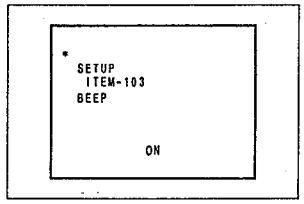
*3SEC	3 seconds
5SEC	5 seconds
7SEC	7 seconds
10SEC	10 seconds

RS-422 connector

3SEC	3 seconds
*5SEC	5 seconds
7SEC	7 seconds
10SEC	10 seconds

103 BEEP

Choose whether or not to beep when a key is pressed, and when an edit point is passed during preview or automatic edit execution.

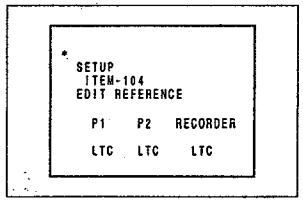


Settings

OFF	Do not beep.
*ON	Beep.

104 EDIT REFERENCE

Select the time data type for player 1, player 2 and the recorder. Select LTC (longitudinal time code) or CTL by rotating the search dial only.



Settings

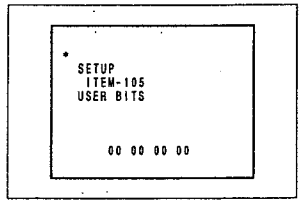
*LTC
CTL

Note

There is a greater possibility that errors will occur during high-speed tape transport (for example, between the preroll point and the IN point) when CTL signals are used. This item should normally be set to LTC unless there is no time code recorded on the tape.

105 USER BITS

You can freely use the 32 bits in the user bits section of time code to record information such as dates or cut numbers. Rotate the search dial only to select two-digit hexadecimal values between 00 and FF.

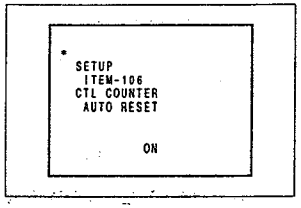


Settings

*00
00 to FF

106 CTL COUNTER AUTO RESET

Choose whether or not to automatically reset the CTL counter when the unit is turned on and off, and when tapes are ejected.



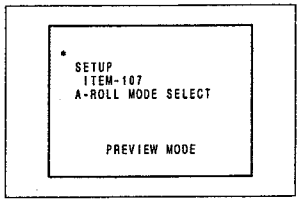
Settings

*ON	Reset.
OFF	Do not reset.

1-89

107 A-ROLL MODE SELECT

In A-roll editing, some recorder VCRs enter E-E mode before the IN point, making it impossible to read in a freeze frame. When this occurs, select PREVIEW MODE under this item before executing the edit.



Settings

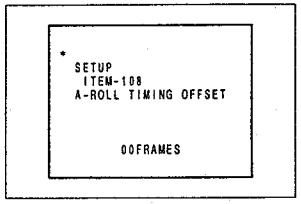
AUTO EDIT MODE	When AUTO EDIT/ END button is pressed, read in frame two frames before recorder IN point and execute edit immediately.
*PREVIEW MODE	When AUTO EDIT/ END button is pressed, enter preview mode and read in playback frame one frame before recorder IN point. Then enter edit mode and begin recording.

Note

When this item is set to PREVIEW MODE the unit requires more time to execute an edit.

108 A-ROLL TIMING OFFSET

In A-roll editing, the frame before the recorder IN point is read into digital frame memory. But depending on the VCR in use, automatic freeze timing may be off by a certain number of frames. If the unit is unable to read in the correct freeze frame, use this item to specify an offset in frames between the correct frame and the frame which was actually read in. For example, if the frame actually read in was two frames after the IN point, set this menu item to –03 FRAMES to read in the frame one frame before the IN point.

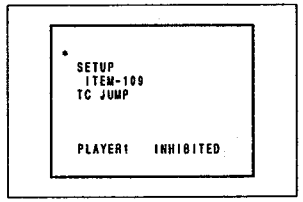


Settings

*00FRAMES	Do not adjust timing.
–10 to 10 FRAMES	Adjust timing by number of frames.

109 TC JUMP

Select whether or not to continue editing when non-consecutive time codes are discovered between the preroll point and the IN point. To select settings for player 1, player 2, and the recorder, rotate the search dial only while pressing the DATA button.



Settings

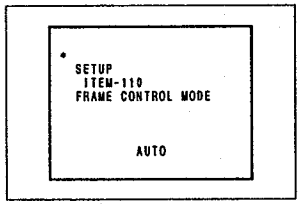
ALLOWED	Continue editing despite non-consecutive time codes.
*INHIBITED	Do not continue editing.

Note

When time codes are not consecutive, it takes longer to cue up an edit point.

110 FRAME CONTROL MODE (FXE-100 only)

Select the frame control mode for time code processing (drop-frame or non-drop frame mode).



Settings

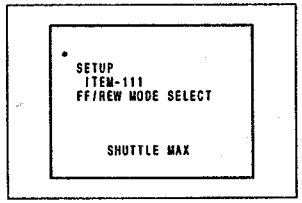
*AUTO	Use the mode found on recorder tape.
DF	Drop-frame mode.
NDF	Non-drop frame mode.

Note

If you execute a first edit when this item is set to AUTO, time code is inserted in non-drop frame mode.

111 FF/REW MODE SELECT

Select the high-speed transport mode selected by pressing the REW (rewind) and FF (fast forward) buttons in the MANUAL CONTROL section.



Settings

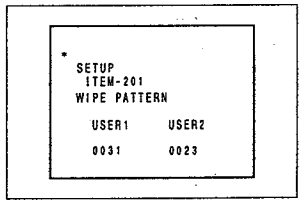
*SHUTTLE MAX	Maximum-speed shuttle mode
FF/REW	Fast forward and rewind mode

Switcher

201 WIPE PATTERN

Select the patterns to assign to the USER1 and USER2 buttons in the WIPE PATTERN section by choosing a four-digit decimal pattern code number for each button. Rotate the search dial only to select the button for assignment.

For wipe pattern code numbers, see the table in the Appendixes (page A-11).

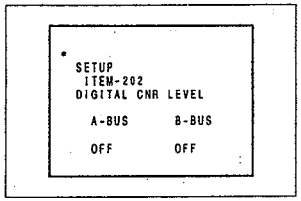


Default user button assignments

USER 1	USER 2
EXPLOSION	
0031	0023

202 DIGITAL CNR LEVEL

Select the color noise reduction (CNR) level for video read into digital frame memory. Rotate the search dial only to select settings for bus A and bus B.



Settings

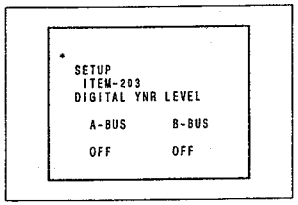
*OFF	No CNR
LOW	Low level
MIDDLE	Middle level
HIGH	High level

Note

If CNR is set to HIGH, a faint color shadow remains from the previous frame when frames are switched. This is not a malfunction in the unit.

203 DIGITAL YNR LEVEL

Select the luminance (Y signal) noise reduction level for video read into digital frame memory. Rotate the search dial only to select settings for bus A and bus B.

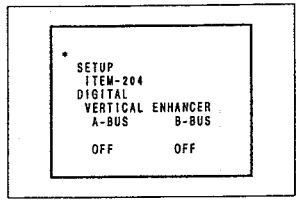


Settings

*OFF	No YNR
VERY LOW	Very low level
LOW	Low level
MIDDLE	Middle level
HIGH	High level

204 DIGITAL VERTICAL ENHANCER

Select the trigger level for the vertical enhancement circuits, which produce sharp edges in the picture. Rotate the search dial only to select settings for bus A and bus B.

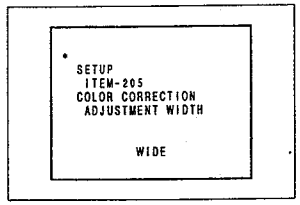


Settings

*OFF	No vertical enhancement
VERY LOW	Very low level
LOW	Low level
MIDDLE	Middle level
HIGH	High level

205 COLOR CORRECTION ADJUSTMENT WIDTH

Select the COLOR CORRECTION joystick range.



Settings

*WIDE	Coarse adjustment
FINE	Fine adjustment

1-91

206 VIDEO LEVEL & HUE ADJUSTMENT WIDTH (FXE-100) VIDEO LEVEL & CHROMA PHASE ADJUSTMENT WIDTH (FXE-100P)

Select the adjustment range for the HUE (FXE-100) or CHROMA PHASE (FXE-100P), LUMINANCE and CHROMINANCE knobs in the VIDEO LEVEL & HUE (FXE-100) or VIDEO LEVEL & CHROMA PHASE (FXE-100P) section.

a) FXE-100: VIDEO LEVEL & HUE
FXE-100P: VIDEO LEVEL & CHROMA PHASE

Settings

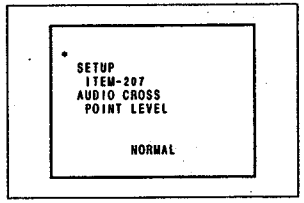
WIDE	Coarse adjustment
*FINE	Fine adjustment

Note for FXE-100P

When adjusting the color subcarrier phase, use a vectorscope to measure the adjustments.

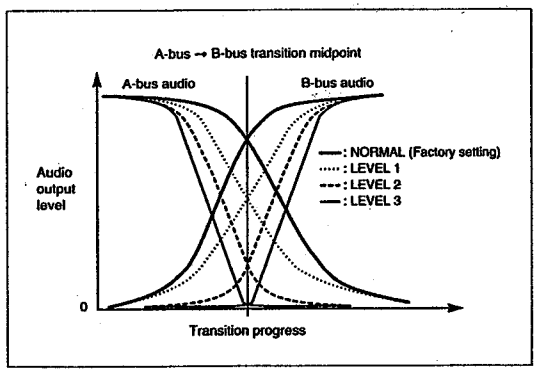
207 AUDIO CROSS POINT LEVEL

Select the audio cross point, or level at the transition midpoint where the audio signals overlap when switching between the two buses. Audio output is very low at the LEVEL 3 setting, and increases in volume for both the A and B buses from quiet at the LEVEL 2 setting to normal at the NORMAL setting.



Settings

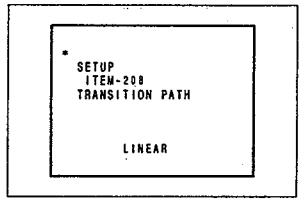
LEVEL 1	Rather low volume
LEVEL 2	Low volume
LEVEL 3	Very low volume
*NORMAL	Normal volume



Transition from bus A to bus B

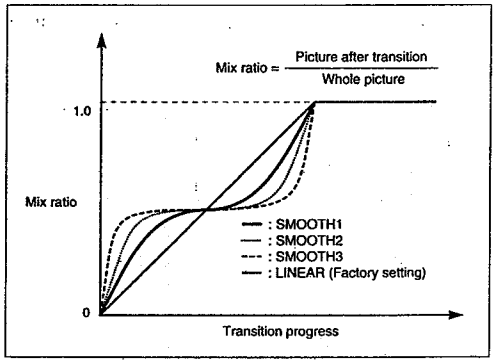
208 TRANSITION PATH

Select the speed at which video is switched during a transition. A-bus video and B-bus video are mixed at identical ratios under the SMOOTH1 to SMOOTH3 settings, and at a linear ratio under the LINEAR setting. The settings in this menu are especially effective when you have selected a mix as the transition effect.



Settings

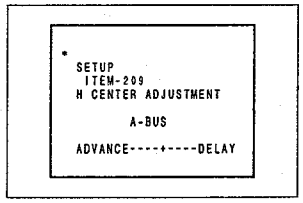
SMOOTH1	Switch quickly.
SMOOTH2	Switch rather quickly.
SMOOTH3	Switch slowly.
*LINEAR	Switch at a constant rate.



Transition path

209 H CENTER ADJUSTMENT

Adjust to control picture stability and horizontal position (horizontal sync phase). While pressing the DATA button, rotate the search dial counterclockwise to move the cross cursor toward ADVANCE (the picture shifts to the left), and clockwise to move it toward DELAY (the picture shifts to the right). Rotate the search dial only to select settings for bus A and bus B.



Settings

*Center	Do not adjust the phase.
ADVANCE	Advance the phase.
DELAY	Delay the phase.

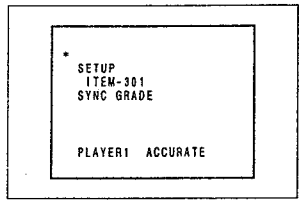
Note

Proceed carefully when adjusting the sync phase.

External Interface and EDL

301 SYNC GRADE

Select synchronizing precision for VCRs connected to this unit. Rotate the search dial only to select player 1, player 2 and the recorder.

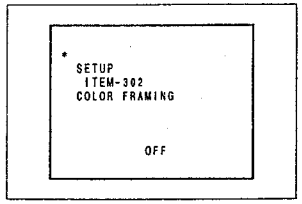


Settings

*ACCURATE	Synchronization is accurate to ±0 frames. The unit monitors VCR synchronization, and does not execute an edit until the VCRs are completely locked. If they cannot be synchronized after three preroll attempts, the accuracy is lowered to +/–1 FRAME.
+/– 1 FRAME	Synchronization is accurate to ±1 frame. Executes an edit if all checkpoints are accurate to within one frame. If VCRs cannot be synchronized after two preroll attempts, the accuracy is lowered to ROUGH.
ROUGH	Executes an edit as soon as sync signals coincide, however briefly. If VCRs cannot be synchronized after two preroll attempts, the accuracy is lowered to PREROLL & PLAY.
PREROLL & PLAY	No synchronization. Execute edit immediately after preroll.

302 COLOR FRAMING

Select whether color framing or time code should be given priority when recording on the master tape.

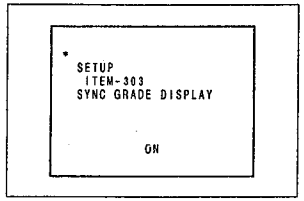


Settings

*OFF	Use time codes recorded on the master tape.
VTR SETTING	Use the color framing settings selected on the recorder VCR side.

303 SYNC GRADE DISPLAY

Select whether or not to include the VCR sync grade, set under menu item 301, in the main monitor status display.

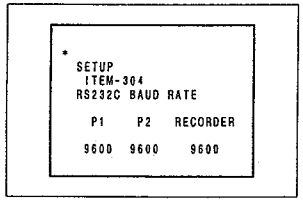


Settings

OFF	Do not display.
*ON	Display.

304 RS232C BAUD RATE

Select the data transmission rate for transmissions to equipment connected to the RS-232C connectors. Rotate the search dial only to set the rate for player 1, player 2 and the recorder.

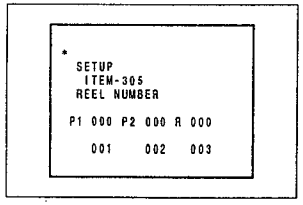


Settings

*9600	9600 bps
19200	19200 bps

305 REEL NUMBER

The number shown to the right of each VCR (P1, P2 and R) is the reel number currently assigned in the EDL. Rotate the search dial only to set reel numbers for tapes loaded in player 1, player 2 and the recorder.



Settings

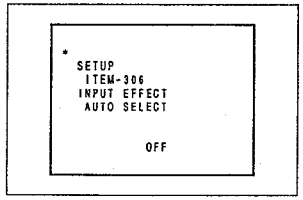
0 to 9	Most significant digit
00 to 99	Two least significant digits

Default settings

P1	001
P2	002
R	003

306 INPUT EFFECT AUTO SELECT

Either the fader lever or the A-BUS and B-BUS buttons in the INPUT EFFECT section can be used to select the bus affected by input effects. Use this menu item to choose automatic selection by the fader lever, or manual selection by the A-BUS and B-BUS buttons.

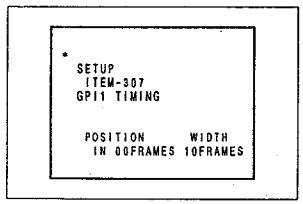


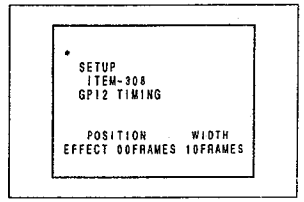
Settings

*OFF	Input effect bus selected by A-BUS and B-BUS buttons, regardless of fader lever position.
ON	Input effect bus selected by fader lever position. A-BUS and B-BUS buttons are disabled and do not light when pressed.

307 GPI1 TIMING
308 GPI2 TIMING

Select the timing and pulse width of pulses output from the GPI1 OUT and GPI2 OUT connectors. Pulses may be output at the IN point, at the effect starting point, or at the OUT point, as selected here.
When this menu is displayed, one of the IN, EFFECT or OUT settings will be visible and flashing. If, at this point, you press the DATA button and rotate the search dial, you can select the other settings. When you reach the desired setting, release the DATA button and the frame count begins to flash. In this state, you can rotate the search dial while pressing the DATA button to select an offset in frames between the IN, effect or OUT point and the point where the pulses are actually output. Or you can rotate the search dial only to select the pulse width.





(Continued)

Settings

Output points

*IN	IN point (GPI1 factory default)
*EFFECT	Effect starting point (GPI2 factory default)
OUT	OUT point

Output timing

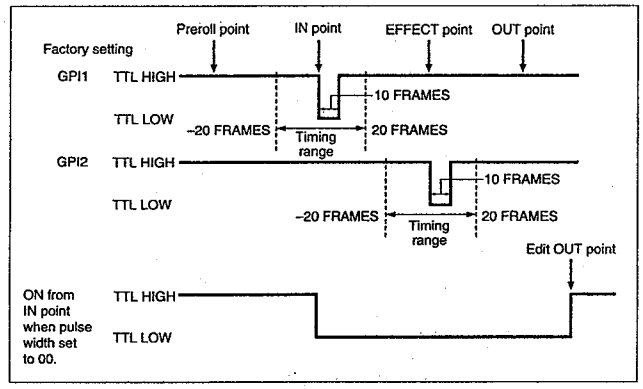
*00FRAMES
–20 to 20 FRAMES

Pulse width

*10FRAMES
00 to 10FRAMES[a]

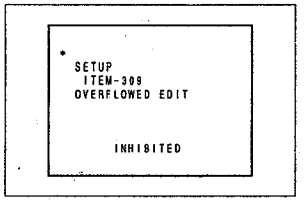
a) When set to 00, the GPI pulse remains ON until the end of the edit.

The range of selectable pulse timing offsets is as follows.



309 OVERFLOWED EDIT

Specifies how the unit should respond when an attempt is made to register a new edit when the EDL is already full (already contains 99 edits).

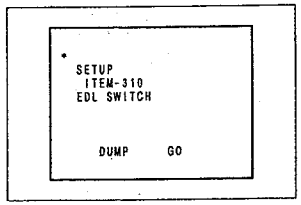


Settings

*INHIBITED	The new edit is not registered, and an error code is displayed in the time counter display.
OVERWRITE	Edit number 001 is overwritten by the new edit.
ALL CLEAN UP	All edits are deleted from EDL memory.

310 EDL SWITCH

Transmit or receive EDL data through the RS-232C connectors.
Display the DUMP item when you want to export data, or the LOAD item when you want to import data, and then press the SET button. Next rotate the search dial to select GO and press the SET button once more to begin the transmission.
To stop the transmission, rotate the search dial to select CANCEL and then press the SET button.



Settings

*DUMP	Transmit data.
LOAD	Receive data.

*GO	Begin transmission
CANCEL	Stop transmission

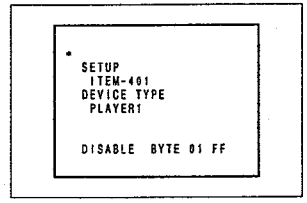
VCR Device Constants

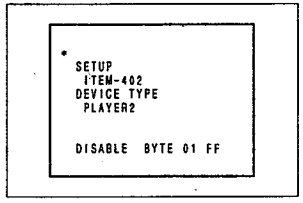
401 DEVICE TYPE PLAYER 1
402 DEVICE TYPE PLAYER 2
403 DEVICE TYPE RECORDER

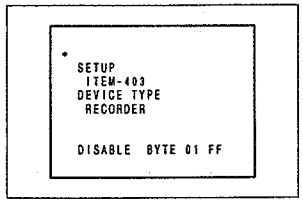
Using status signals sent by the VCR, the FXE-100 is able to automatically identify many commonly used VCRs, and to control tape transport for those VCRs by referring to an internal device constant table.
VCR device constants are made up of 15 data items, each item being expressed as a two-digit hexadecimal number.

For details, see "VCR constant data items" (page 8-21) and "Automatically detected VCRs and internal device constants" (page 8-22).

Normally it should not be necessary to set VCR constants manually. But depending on operating conditions and the type of VCR, the unit is sometimes unable to achieve the precise control needed for editing. In such cases, you can use these menu items to define new device constants for each VCR.
To define a device constant, set the DISABLE/ENABLE parameter to ENABLE, select the data byte (a decimal number between 00 and 15) which you want to modify, and then select a two-digit hexadecimal value for that byte.
When not using a newly defined device constant, return the DISABLE/ENABLE parameter to DISABLE.







Settings	
*DISABLE	Use the unit's device constant table instead of user-defined device constants.
ENABLE	Use user-defined device constants.

Item number	Value
BYTE 01 to 15 (decimal)	00 to FF (hexadecimal)

VCR constant data items

VCR constant data items

Item number	Setting	Meaning
BYTE 01 BYTE 02	Device type	Defines the VCR type. **Factory default:**BYTE 01: FF BYTE 02: FF
BYTE 03 BYTE 04	Minimum preroll time	Specifies the minimum preroll time required by the VCR in units of frames. The preroll time specified here is always used, even if setup menu item 102 PREROLL TIME is used to specify a shorter time. BYTE 03 is the most significant byte. **Factory default:** 00 5A (FXE-100) or 00 55 (FXE-100P)
BYTE 05	Edit delay	Corrects for the delay in frames from the time when a REC command is sent to the VCR until the time when recording actually starts. **Factory default:** 05
BYTE 06	E-E delay	Corrects for the delay in frames from the time when a PB/EE command is sent to the VCR until the time when it actually enters preview mode. **Factory default:** 05
BYTE 07	Overrun delay	Corrects for the overrun in frames past a specified preroll point in a preroll stop. **Factory default:** 03 (FXE-100) or 02 (FXE-100P)
BYTE 08	Trajectory	Specifies the optimum speed curve for preroll. Higher values are required for VCRs with lower positionability. **Factory default:** 84
BYTE 09	Time code read delay	Corrects for the delay in frames from the time when a VCR receives a tape transport command until the time when it is able to read time code. **Factory default:** 0A
BYTE 10	Pinch-on delay	Corrects for the delay in frames from the time when a VCR receives a tape transport command until it actually begins moving the tape. **Factory default:** 08 (FXE-100) or 07 (FXE-100P)
BYTE 11	Post-sync delay (–)	For the transition to playback after synchronization, specifies the optimum command delay in frames for servo-lock from lower speeds. **Factory default:** FB
BYTE 12	Post-sync delay (+)	For the transition to playback after synchronization, specifies the optimum command delay in frames for servo-lock from higher speeds. **Factory default:** 00
BYTE 13	MODE 1	Bits 1 to 7: Specify the maximum framing value permitted by the VCR format. 0: 2-field lock 1: 4-field lock 3: 8-field lock Bit 8: Specifies whether or not the VCR permits CTL (timer) interpolation of time code. 1: Possible 0: Not possible **Factory default:** 80
BYTE 14	Mode 2	Bit 1: Specifies whether color framing status from the VCR is enabled or disabled. 1: Enabled 0: Disabled Bits 2 to 8: Specify the maximum time in frames until VCR frame lock. **Factory default:** 2E (FXE-100) or 2A (FXE-100P)
BYTE 15	Max preroll speed	Specifies the maximum tape speed during preroll as a multiple of normal tape speed. When set to FF, the speed is the same as fast forward and rewind speed. **Factory default:** FF

Automatically detected VCRs and internal device constants

The FXE-100/100P is able to detect VCRs in the following table automatically, and to control them using the constant values (hexadecimal) in data items 3 through 15.

FXE-100 internal device constants

Data Item / VCR type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VO-9800	10	48	00	96	08	08	04	0C	0A	04	FF	00	00	78	08
VO-9850	10	4C	00	96	08	08	04	0C	0A	04	FF	00	00	78	08
SVP-9000	10	28	00	96	08	08	05	8A	0A	04	FF	00	00	78	0A
SVO-9600	10	2C	00	96	08	08	05	8A	0A	04	FF	00	00	78	0A
PVW-2600	20	40	00	96	05	05	03	04	0A	08	FB	00	81	19	FF
PVW-2800	20	41	00	96	05	05	03	04	0A	08	FB	00	81	19	FF
PVW-2650	20	42	00	96	05	05	03	84	0A	08	FB	00	9D	19	FF
UVW-1600	20	50	00	5A	05	05	03	84	0A	08	FB	00	80	2E	FF
UVW-1800	20	51	00	5A	05	05	03	84	0A	08	FB	00	80	2E	FF
EVO-9800/9800A	80	08	00	96	08	08	07	94	0A	07	FC	00	00	5A	07
EVO-9850	80	0C	00	96	05	05	07	80	0A	06	FC	00	00	5A	0A

FXE-100P internal device constants

Data Item / VCR type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VO-9800P	11	48	00	7D	08	08	04	0C	0A	04	FF	00	01	64	08
VO-9850P	11	4C	00	7D	08	08	04	0C	0A	04	FF	00	01	64	08
SVP-9020	11	28	00	7D	08	08	05	8A	0A	04	FF	00	01	4B	0A
SVO-9620	11	2C	00	7D	08	08	05	8A	0A	04	FF	00	01	4B	0A
PVW-2600P	21	40	00	7D	05	05	03	04	0A	07	FF	00	83	31	FF
PVW-2800P	21	41	00	7D	05	05	03	04	0A	07	FF	00	83	31	FF
PVW-2650P	21	42	00	7D	05	05	03	84	0A	08	FB	00	9F	19	FF
UVW-1600P	21	50	00	55	05	05	02	84	0A	07	FB	00	80	2A	FF
UVW-1800P	21	51	00	55	05	05	02	84	0A	07	FB	00	80	2A	FF
EVO-9800P	81	08	00	7D	08	08	08	8E	0A	07	FC	00	01	5B	07
EVO-9850P	81	0C	00	7D	05	05	07	80	0A	0A	FC	FE	01	4C	0A

For more information about connecting VCRs other than those listed above, please contact qualified Sony service personnel.

Error Messages

When you try to perform an illegal operation, or when there is a problem with the connected VCRs, an error code is shown in the appropriate time counter display and an error message is shown in the main monitor status display. Take the action shown below to correct the problem.

Note

Error messages use the following abbreviations to refer to VCRs.
P1: Player 1
P2: Player 2
R: Recorder

Error code	Error message	Meaning	Action to take
01	CANNOT CONTROL DUE TO VTR LIMITATION	A limitation on the VCR side prevented execution of an edit setting.	Consult your VCR manuals and execute the edit again after removing the limitation.
02	CANNOT CUE UP P1, P2, R	The specified edit point cannot be cued up.	Check whether the edit point exists on the tape. If time code data on the tape is discontinuous, use setup menu item 109 TC JUMP to select discontinuous time code for the VCR, then try to cue up again.
03	CANNOT EXECUTE P1, P2, R	Edit execution began but could not be completed.	Check the VCR(s) which caused the failure.
04	CANNOT PRESET TIME CODE P1, P2, R	The unit cannot preset time code because VCR time code switches are set to prevent it.	• Set VCR switches to allow the unit to preset time code. • Check to be sure that the VCR supports time code recording.
05	CANNOT READ TIME CODE P1, P2, R	Time code could not be read when the MARK IN or MARK OUT button in the TIME MARK section was pressed.	Check the time code selected under setup menu item 104 EDIT REFERENCE.
06	CANNOT RECORD	Recording did not start when the AUTO EDIT/END button or the REC button in the MANUAL CONTROL section was pressed.	• Check to be sure that the tape is not write inhibited. • Check to be sure that the VCR connected to the recorder connector on the connector panel supports recording as well as playback.
07	CANNOT SYNCHRONIZE P1, P2, R	The listed VCRs could not be synchronized at the specified precision.	Use setup menu item 301 SYNC GRADE to lower the synchronizing precision for the listed VCRs.
08	CODE CONFLICTED P1, P2, R	Conflicting data was entered in the setup menu.	Enter the data again, removing the conflict.
09	DEFINE DURATION	An attempt was made to execute an edit without setting a duration for auxiliary source 1.	Set the duration for auxiliary source 1 (AUX).
10	DEFINE EDIT MODE	Edit execution was attempted without selecting an edit mode.	Select an edit mode.
		The AUDIO SPLIT button was pressed to perform a split edit in assemble mode.	Select insert mode to perform a split edit.

Error code	Error message	Meaning	Action to take
11	DEFINE IN POINT	Edit execution was attempted without defining a source IN point.	Define the IN point.
12	DEFINE OUT POINT	An attempt was made to register an edit in the EDL without defining a recorder OUT point. Or edit execution was attempted using an invalid recorder OUT point.	Define a valid recorder OUT point.
13	EDIT NOT FOUND	In an edit recall operation, the specified edit could not be found in the EDL.	Specify a different edit number.
14	EDL ERROR	The EDL may be corrupt.	Check the contents of the EDL.
15	ERROR	An invalid operation was attempted, or invalid data was entered.	Check the operation, or re-enter the data.
16	EDL COMM ERROR	An error occurred during communications with equipment connected to the EDL IN/OUT connector.	Check the external communications program to be sure that it is using the correct data transmission protocol (*see page 7-11*).
17	ILLEGAL FADE TIME	The fade in transition time is longer than the FROM source duration.	Reset the fade in transition time to a value shorter than the FROM source duration.
		The fade out transition time is longer than the TO source duration.	Reset the fade out transition time to a value shorter than the TO source duration.
18	ILLEGAL SOURCE	An invalid source was specified.	Specify a valid source.
19	ILLEGAL TRANS TIME	The effect transition time is longer than the TO source duration.	Reset the effect transition time to a value shorter than the TO source duration.
20	MEMORY FULL	An attempt was made to register an edit in the EDL when EDL memory was already full.	Transfer unneeded edits to external equipment, then delete them from the EDL.
21	ROM ERROR	A checksum error occurred in the system program.	There may be an error in system firmware. Contact a Sony service representative.
22	UNMOUNTED REEL NUMBER P1, P2, R	Reel numbers specified for an edit recall operation could not be found on any of the current sources.	To execute a recalled edit, mount the required reels on the VCRs and specify the reel numbers using setup menu item 305 REEL NUMBER.

1-98

In Case of Trouble

If any difficulty should arise during operation, first check the power and connections, then go through the following list. Should the difficulty persist, contact your Sony dealer or a Sony service representative.

Problem	Possible causes and remedies
No picture on the monitor.	• Make sure that the VCRs and monitors are turned on. • Check connections to external equipment[a] *(see "Connections", page 3-3).* • Make sure that the VCRs are in playback mode *(see "Controlling the VCRs", page 4-2).*
No signals from equipment connected to input connectors.	Check setup menu item 101 VIDEO INPUT SELECT. If you have connected a source to the VIDEO INPUT connectors, the setting should be V, for composite video signals. (The factory default setting is S-V, for S-video signals.)
The wrong video is shown on the monitor.	• Select the desired signals with the buttons in the VIDEO INPUT SELECT section. • Check video input connections [a].
The monitor shows only a grey background.	• Check that cassettes are loaded in the players. • A button in the VIDEO INPUT SELECT section may have selected a video input connector with no video input.
The monitor shows only a white or black background.	• If the BKGD button in the VIDEO INPUT SELECT section is lit, press to turn it off. • If the WHITE FADE or BLACK FADE button in the EFFECT TRANSITION section is lit, press to turn it off.
Video quality is poor.	• After verifying that there is no problem with the tape, adjust the video with the knobs in the VIDEO LEVEL & HUE section *(see "Adjusting Video Signals", page 4-15).* • Verify that the posterization effect is off (the POSTRZ button in the INPUT EFFECT section is off). • Verify that the zoom effect is off (the ZOOM button in the INPUT EFFECT section is off). • Verify that coarsest or finest mosaic is not being applied. If the MOSAIC button is lit, try pressing the '+' or '–' button.
The wrong audio signals are heard.	• Select the right signals with the buttons in the AUDIO INPUT SELECT section. • Check audio input connections [a].
There is no input from the microphone.	If the AUX 2/MIC switch in the audio mixer section is set to AUX 2, set it to MIC.
There is no input from auxiliary source 2.	If the AUX 2/MIC switch in the audio mixer section is set to MIC, set it to AUX 2.
Audio volume is too loud or too soft.	Adjust the volume *(see "Adjusting Audio Levels", page 4-16).*
The audio is distorted.	If the audio input connectors on this unit are connected to XLR 3-pin connectors on the audio equipment, set the 600 Ω termination switches to ON.
The video switches too quickly or too slowly.	Set the effect transition time *(see "Setting the Transition Time", page 5-58).*
The fader lever doesn't move.	Extinguish the AUTO TRANS/PAUSE button *(see "Note on the fader lever", page 4-13).*

a) Check to be sure that all cables are firmly seated in the connectors.

Problem	Possible causes and remedies
The wrong mix type or wipe patterns are used.	If any unneeded buttons are lit in the MIX/EFFECT or WIPE PATTERN sections, press to turn them off.
How can I turn off the beep?	Set setup menu item 103 BEEP to OFF.
VCR cannot be controlled.	• Make sure that the VCR is turned on. • Check connections to the VCR[a] *(see "Connections", page 3-3).* • Turn the unit off, and then turn it on again after veryifying that the RS-422/RS232C switches on the connector panel are set to the appropriate positions for the VCR. • If the VCR's REMOTE/LOCAL switch is set to LOCAL, set it to REMOTE.
Nothing is shown in a time counter display.	• Make sure that the VCR is turned on. • Check connections to the VCR[a] *(see "Connections", page 3-3).* • If the VCR's REMOTE/LOCAL switch is set to LOCAL, set it to REMOTE.
Time counter display doesn't change.	The time counter does not change if time code or CTL signals are not recorded on the tape. Check by setting setup menu item 104 EDIT REFERENCE to CTL. If there is still no change in the time counter display, then there are no CTL signals recorded on the tape.
Auto edit or preview does not begin when the AUTO EDIT/END or PREVIEW button is pressed.	• The master tape cassette may be write inhibited. • Check connections to the VCRs[a] *(see "Connections", page 3-3).* • If the tape has played to the end, rewind it. • The VCR's input selection switch may be set incorrectly. • The VCR's NORMAL/EDIT switch may be set incorrectly. • In insert mode: — The wrong insert mode button may have been pressed *(see "Insert Mode", page 5-3).* — CTL signals must be recorded on the entire tape in order to conduct a preview or automatic edit. • In assemble mode: CTL signals must be recorded on the tape, at least around the first IN point. For a new tape, record black signals at the beginning of the tape *(see "Executing a first edit", page 5-7).* • Consult your VCR manuals if the VCR's AUTO OFF indicator is flashing.
In a preview or automatic edit, the actual edit points are not the ones I set.	• When using CTL time data to set edit points, you may have reset a time counter by pressing the RESET button on a counter display panel. • Depending on the VCR, the actual edit points may differ slightly from those set with this unit. Adjust using the TRIM– (=SHIFT + IN) and TRIM+ (=SHIFT + OUT) buttons *(see "Changing edit points" page 5-21).*
There is picture breakup between edits.	• There may be a break in CTL signals between the edits. • Using the REC button causes breakup in the picture after an edit. Connect edits using the AUTO EDIT/END button.
There are stripes on the monitor screen.	Guard band noise is sometimes seen during playback at speeds other than +1 times normal speed. This is not a malfunction.
The picture is unstable.	• There may be noise in the input signals from the VCR. Check by selecting another VCR. The picture may also be unstable if CTL signals on the tape are noisy or irregular. • Recorder video may be unstable when a search (high-speed playback) is carried out on a player. Stop the player, or put it into normal-speed playback mode. • The VCR may not be receiving the correct input of reference video or sync signals.

a) Check to be sure that all cables are firmly seated in the connectors.

1-99

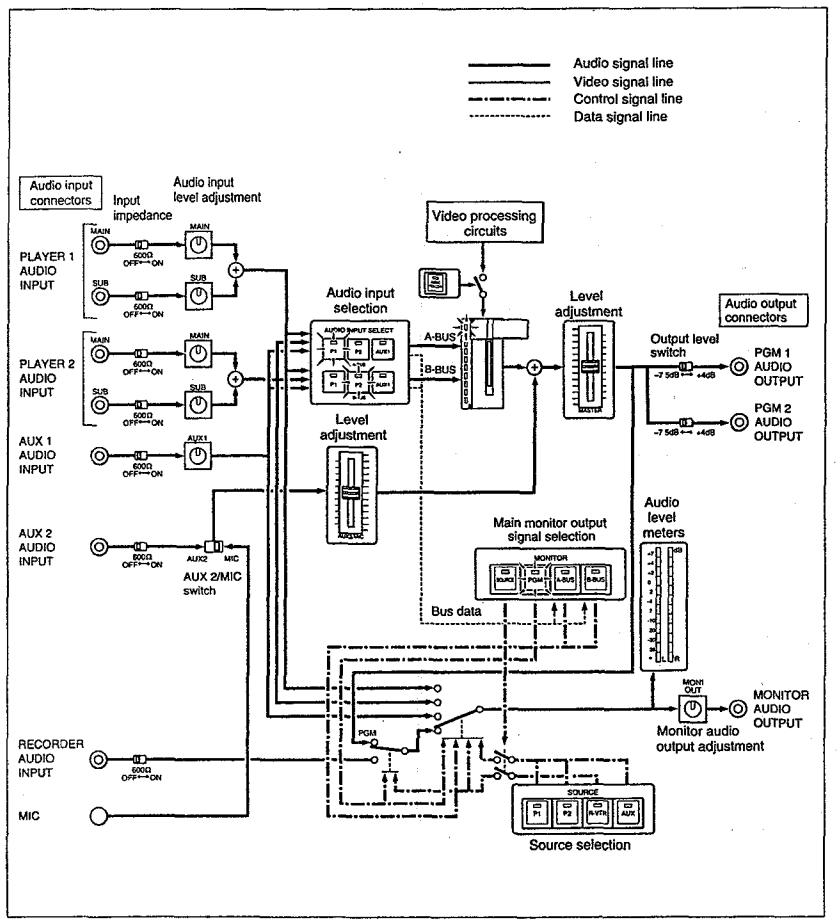
Problem	Possible causes and remedies
The picture drifts vertically.	Check the position of the monitor's vertical sync control.
The setup menu does not appear, even though the MENU indicator in the SCREEN section is lit.	Press the search dial to put it into the jog (depressed) position.
Vertical lines appear in the picture when the zoom input effect is used.	Vertical lines sometimes appear during zoom playback, depending on the capability of the VCR. This is not a malfunction.

Audio Signal Flow

The illustrations in this section show the flow of audio signals when program and source signal channels are selected for output.

Audio signal channels

The audio signal channels of this unit are as follows.



Audio signal channels

Flow of program and source audio

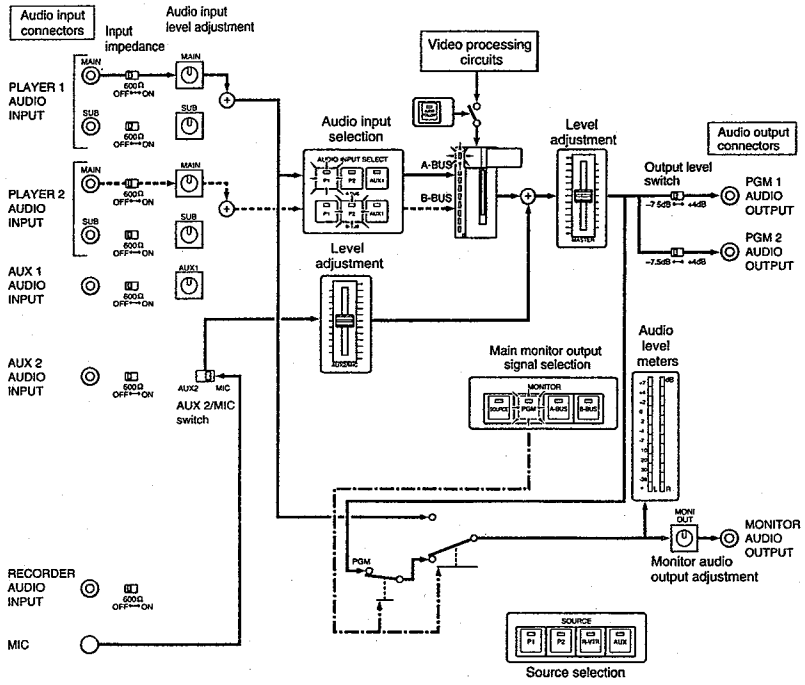
Example 1: When program audio is selected for output to the main monitor

The thick lines (——) and thick broken lines (- - -) show the flow of audio signals when audio controls are set as follows.

AUDIO INPUT SELECT section	A-BUS row: P1 button is lit
	B-BUS row: P2 button is lit
AUDIO FOLLOW button	Off
Fader lever	Pushed all the way to side A
Transition indicators	Only one lit on side A
MONITOR section	PGM button is lit
AUX 2/MIC switch	Set to MIC

Audio signal lines
Video signal line
Control signal line

In this case, player 1 audio will be mixed with input from the microphone and output from the PGM 1/2 AUDIO OUTPUT and the MONITOR AUDIO OUTPUT connectors.



Audio signal flow when program audio is selected for output to the main monitor

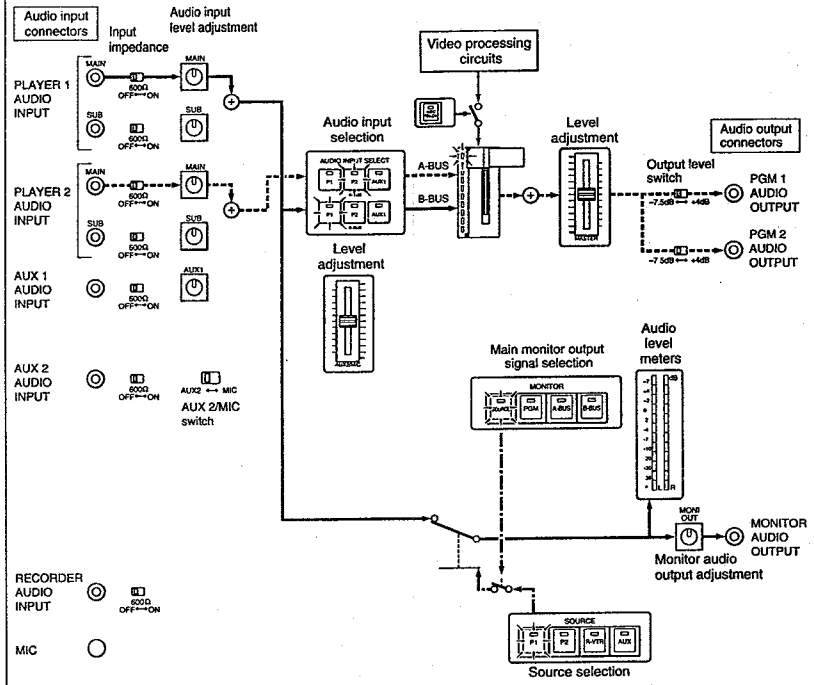
Example 2: When source audio is selected for output to the main monitor

The thick lines (——) and thick broken lines (- - -) show the flow of audio signals when audio controls are set as follows.

AUDIO INPUT SELECT section	A-BUS row: P2 button is lit
	B-BUS row: P1 button is lit
AUDIO FOLLOW button	Off
Fader lever	Pushed all the way to side A
Transition indicators	Only one lit on side A
MONITOR section	SOURCE button is lit
SOURCE switch	P1 button is lit

Audio signal lines
Video signal line
Control signal line

In this case, player 2 audio will be output from the PGM 1/2 AUDIO OUTPUT connectors, and player 1 audio will be output from the MONITOR AUDIO OUTPUT connectors.

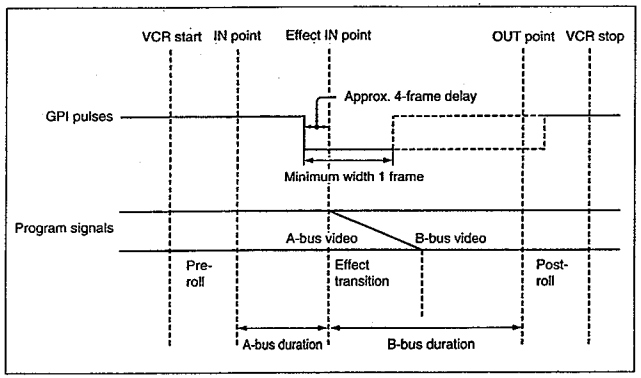


Audio signal flow when source audio is selected for output to the main monitor

GPI Interface Effect Timing

This unit's GPI interface allows you to use external devices to control the timing of effect transitions between A-bus and B-bus source signals.
However, there is a delay of approximately 4 frames between the time when an external device issues a GPI pulse and the time when the effect transition begins. If you need precise control over effect timing, refer to following illustration and adjust the timing of GPI pulses on the external device side.

GPI pulse specifications: TTL LOW level, minimum pulse width 1 frame



GPI interface effect timing

Wipe Patterns

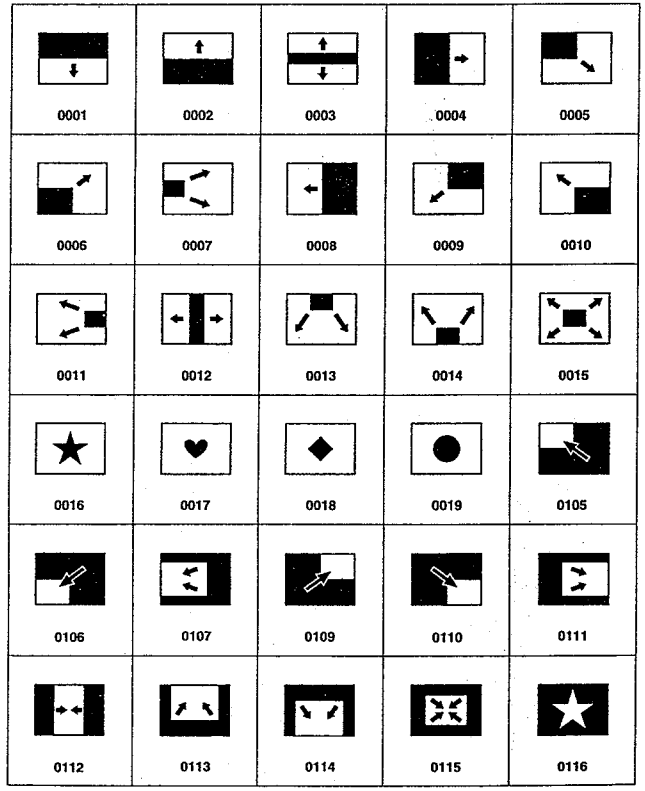
The illustrations in this section show the patterns which can be assigned to the USER 1 and USER 2 buttons in the WIPE PATTERN section, using setup menu item 201 WIPE PATTERN.

For details, see Chapter 8.

Pattern transitions

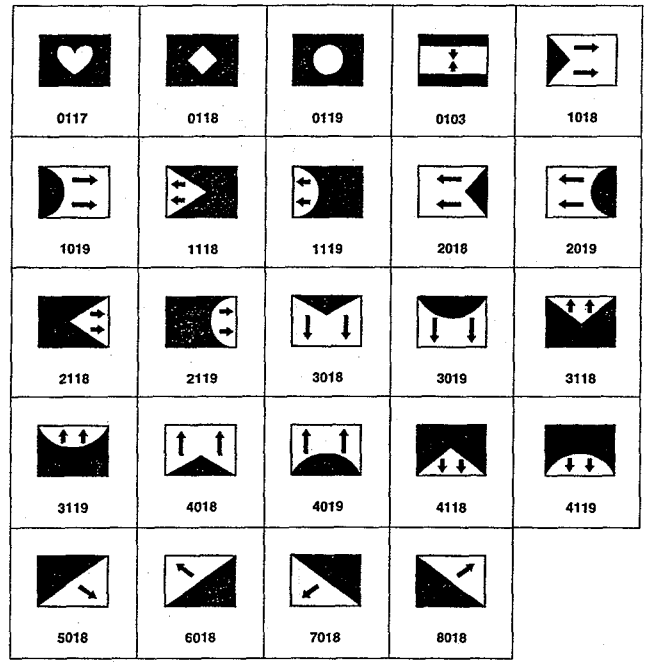
Arrows show wipe directions. In a transition from bus A to bus B, the wipe replaces bus-A video (white portion) with bus-B video (black portion) in the directions shown by the arrows.

Basic patterns 1

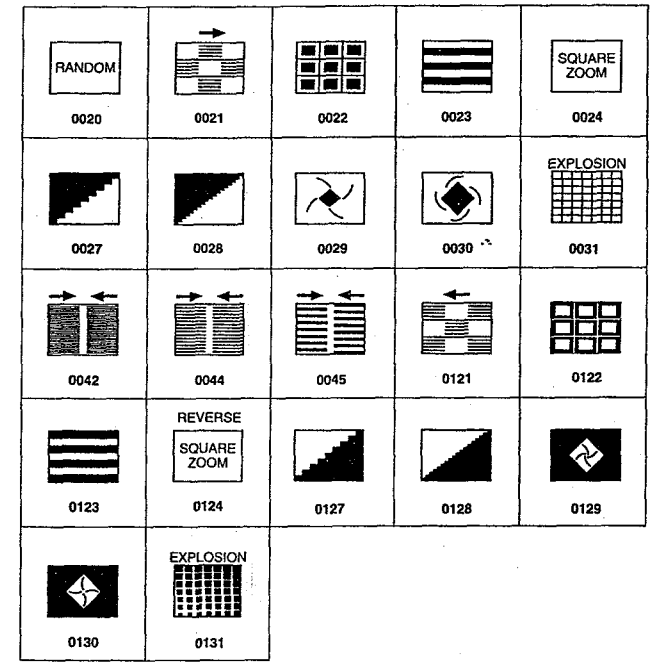


Wipe Patterns

Basic patterns 1 (Continued)

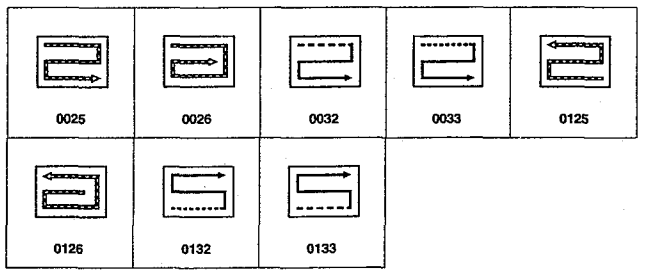


Basic patterns 2

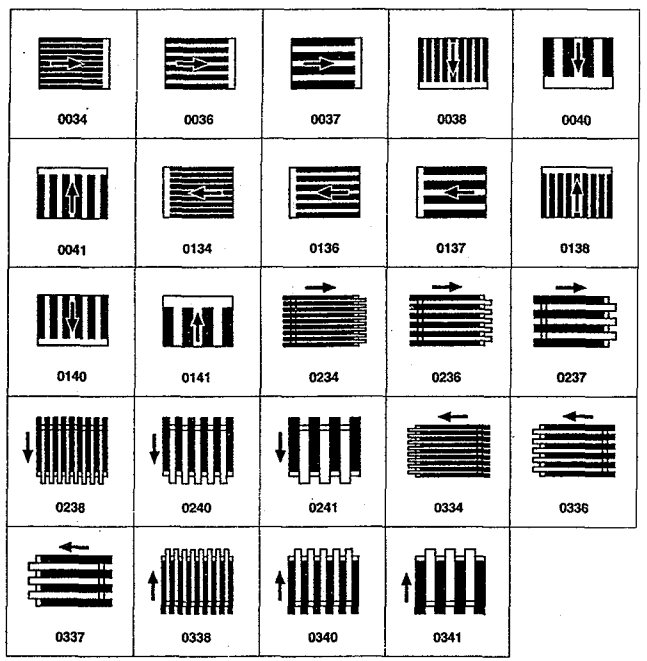


Wipe Patterns

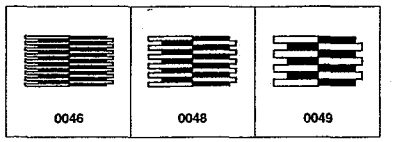
Matrix patterns



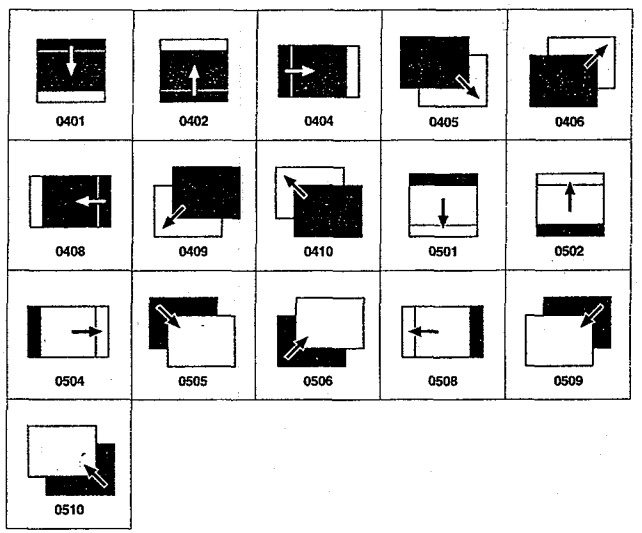
Split slide patterns



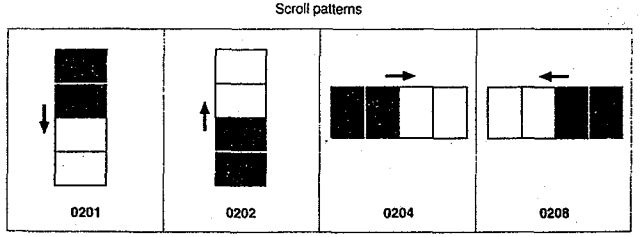
Interborder split patterns



Slide patterns



Scroll patterns

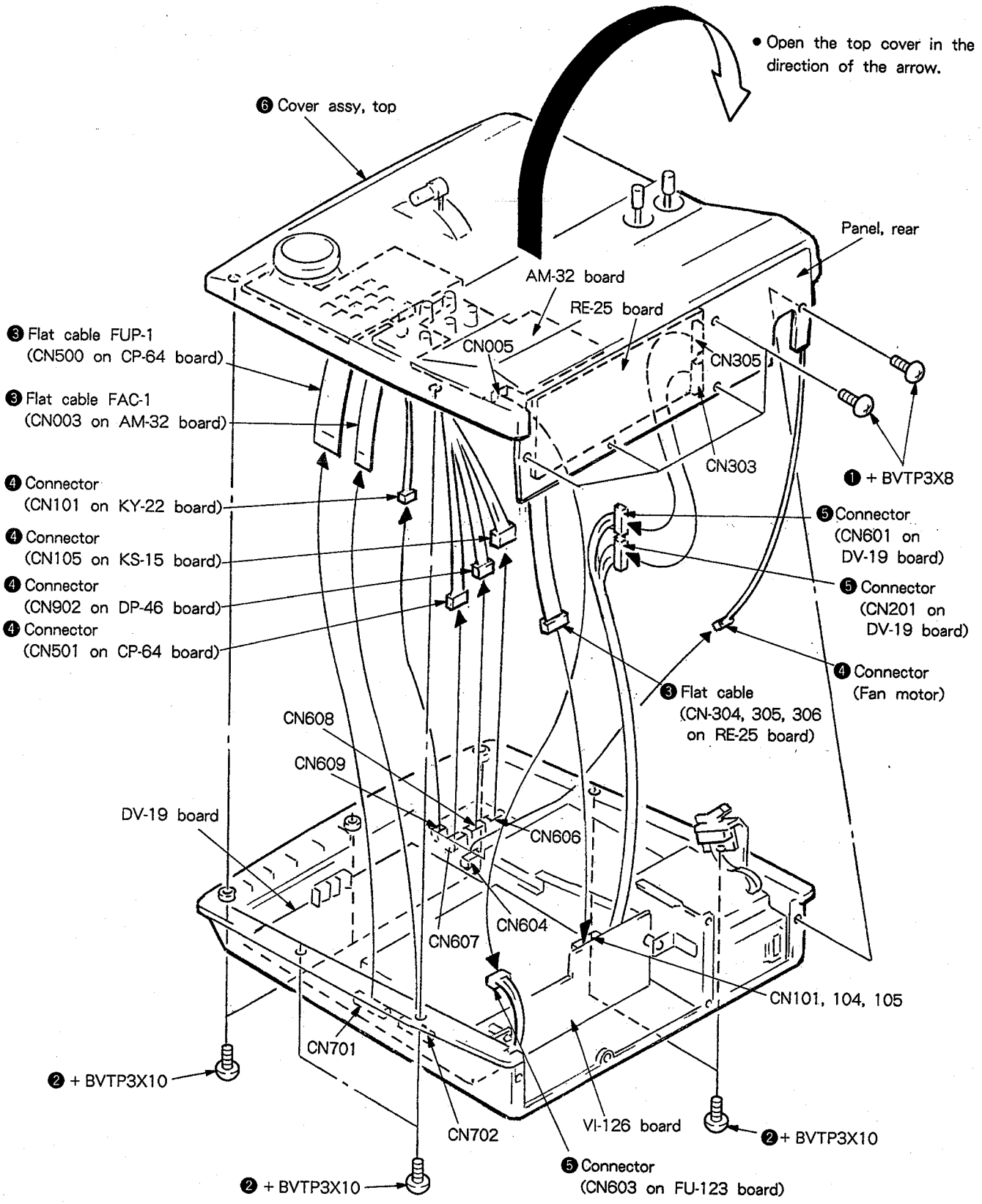


1-104 E

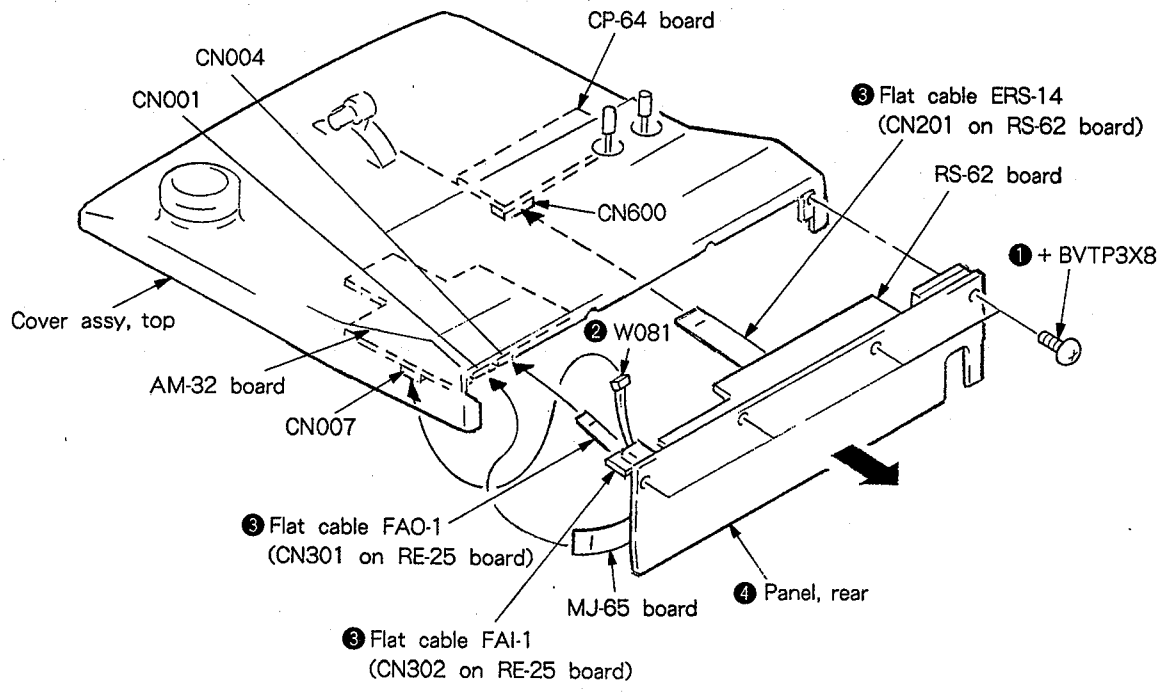
SECTION 2
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

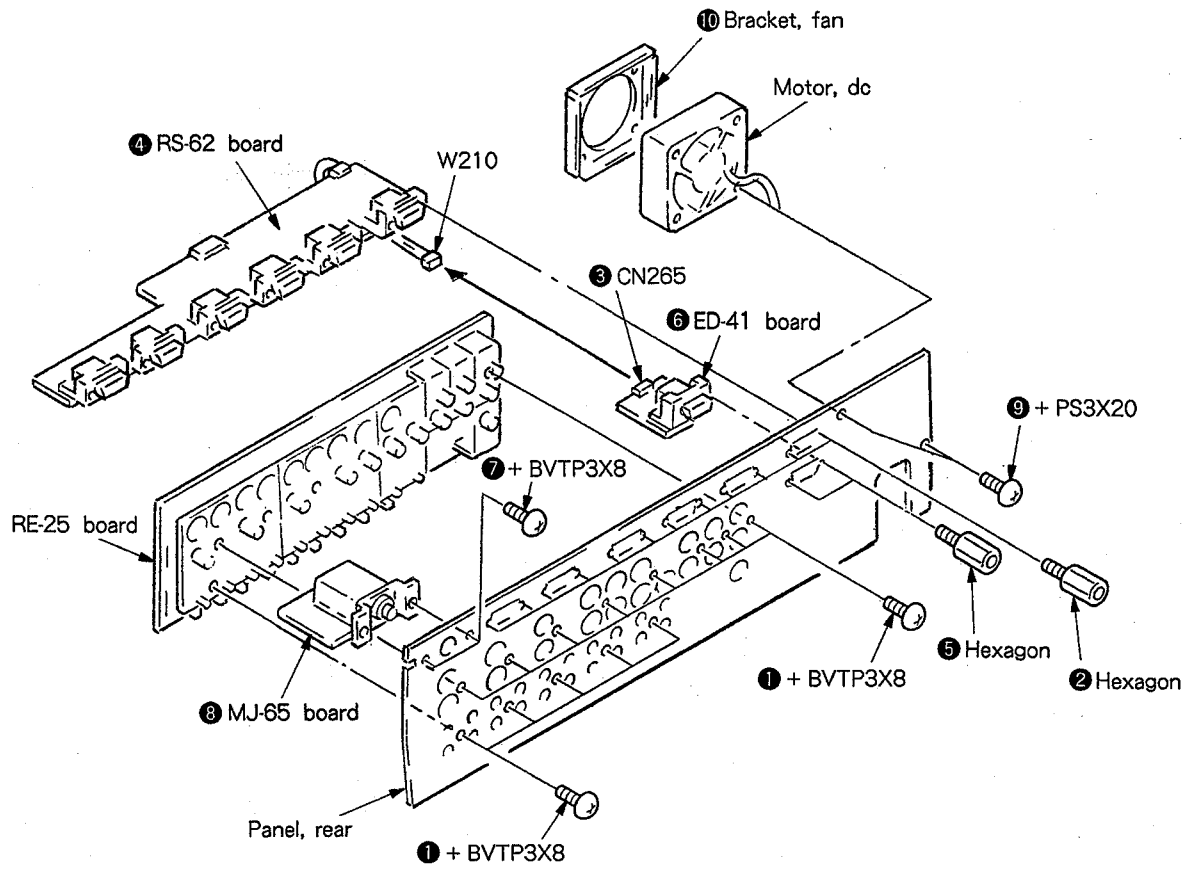
1. REMOVAL OF TOP COVER ASSY



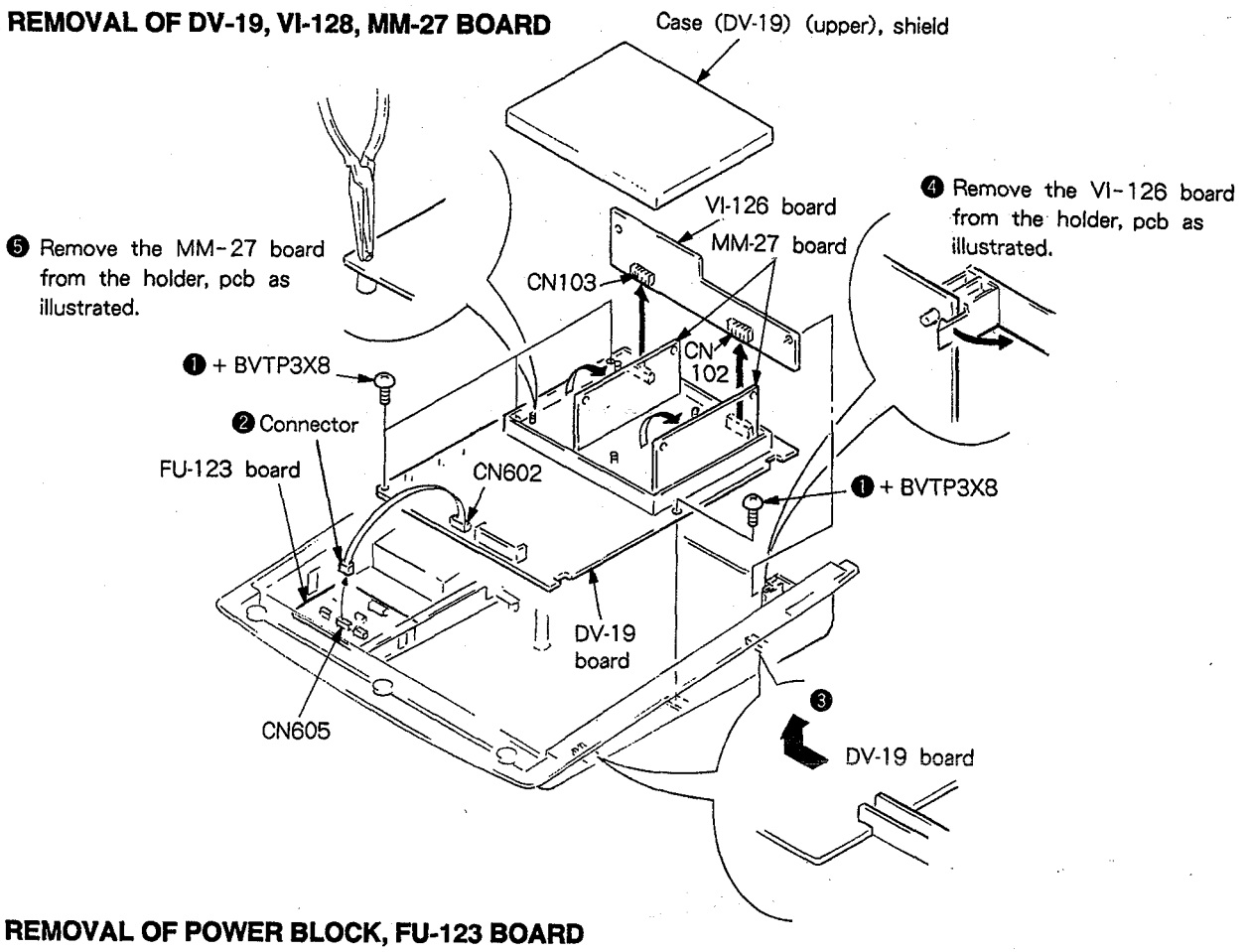
2. REMOVAL OF REAR PANEL



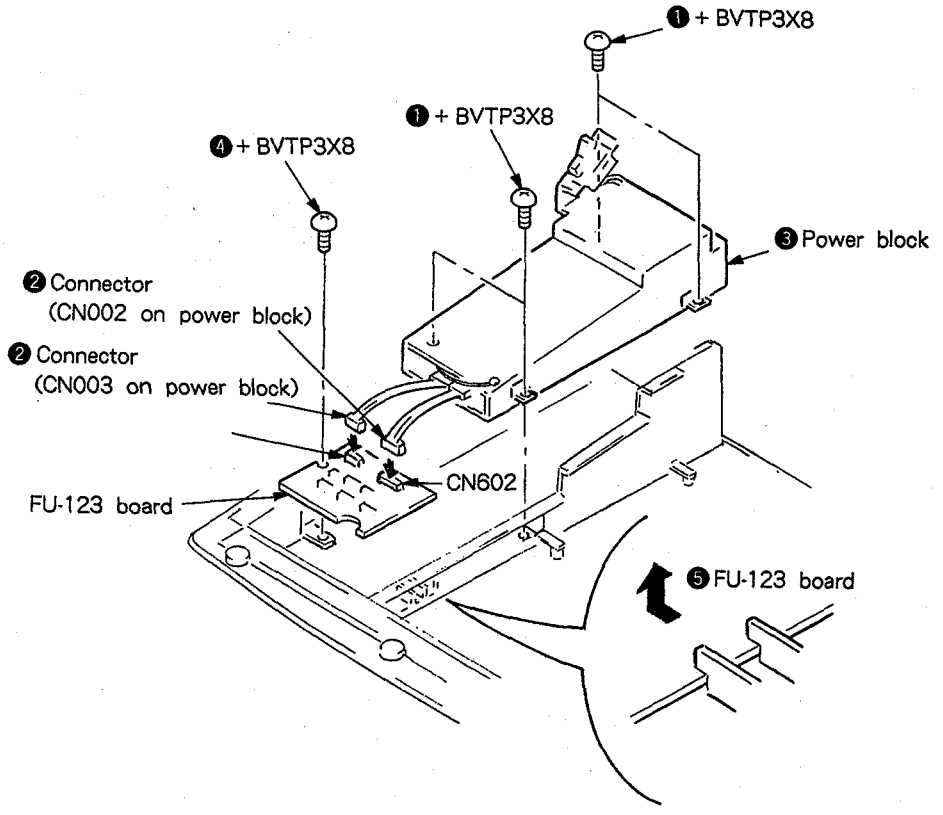
3. REMOVAL OF RE-25, RS-62, ED-41, MJ-65 BOARD AND DC MOTOR



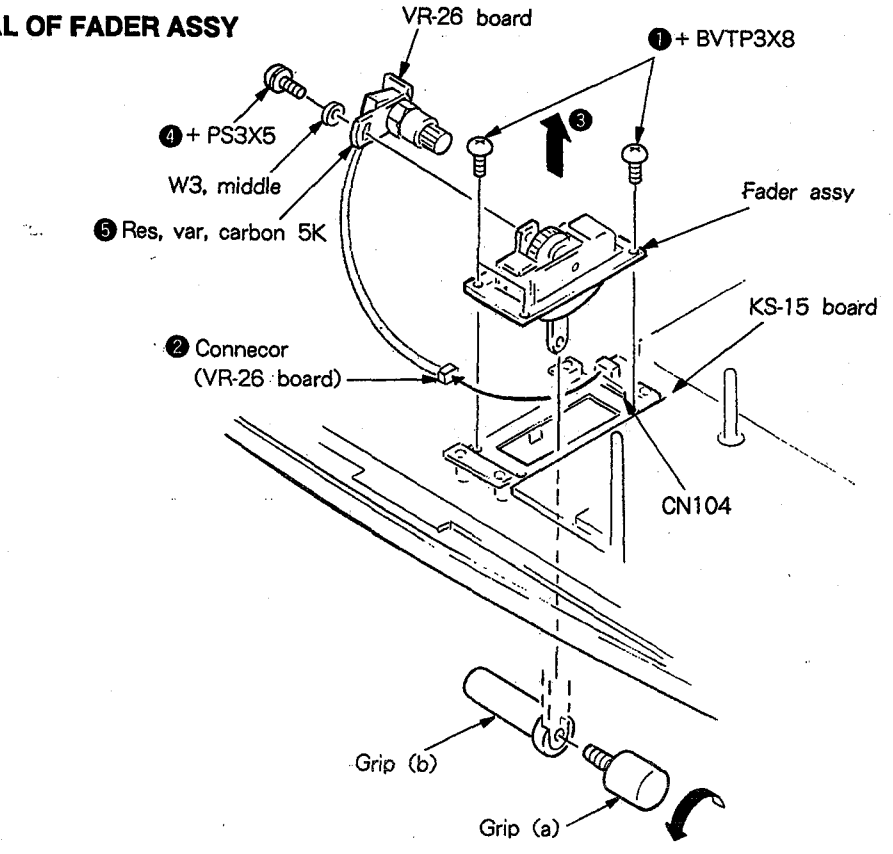
4. REMOVAL OF DV-19, VI-128, MM-27 BOARD



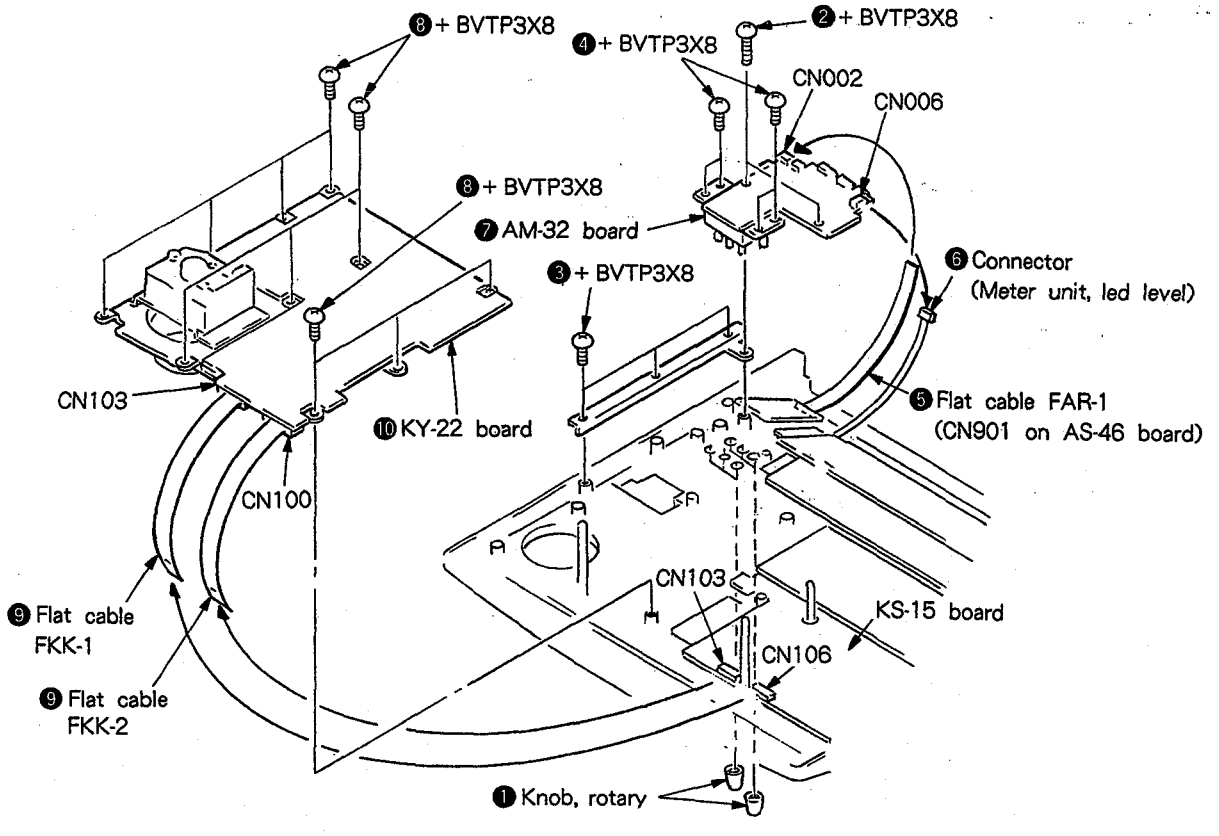
5. REMOVAL OF POWER BLOCK, FU-123 BOARD



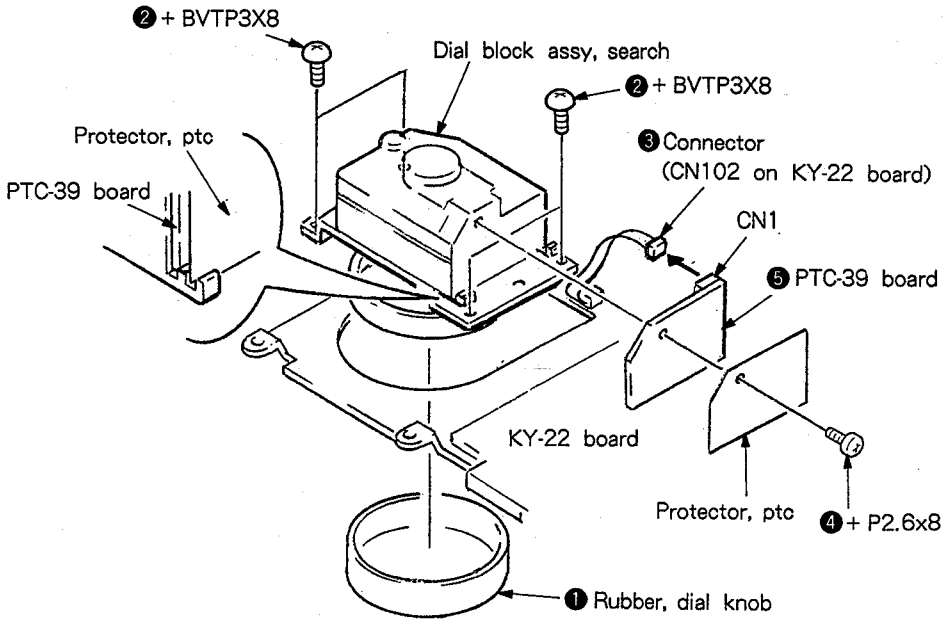
6. REMOVAL OF FADER ASSY



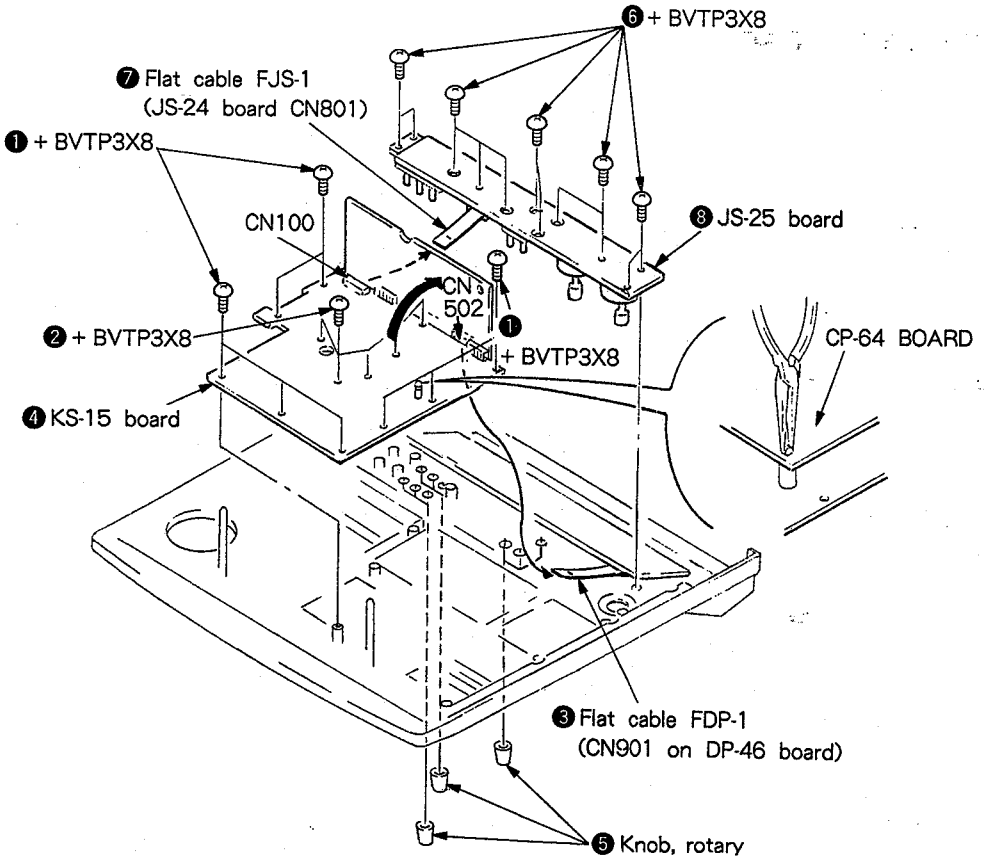
7. REMOVAL OF AM-32, KY-22 BOARD



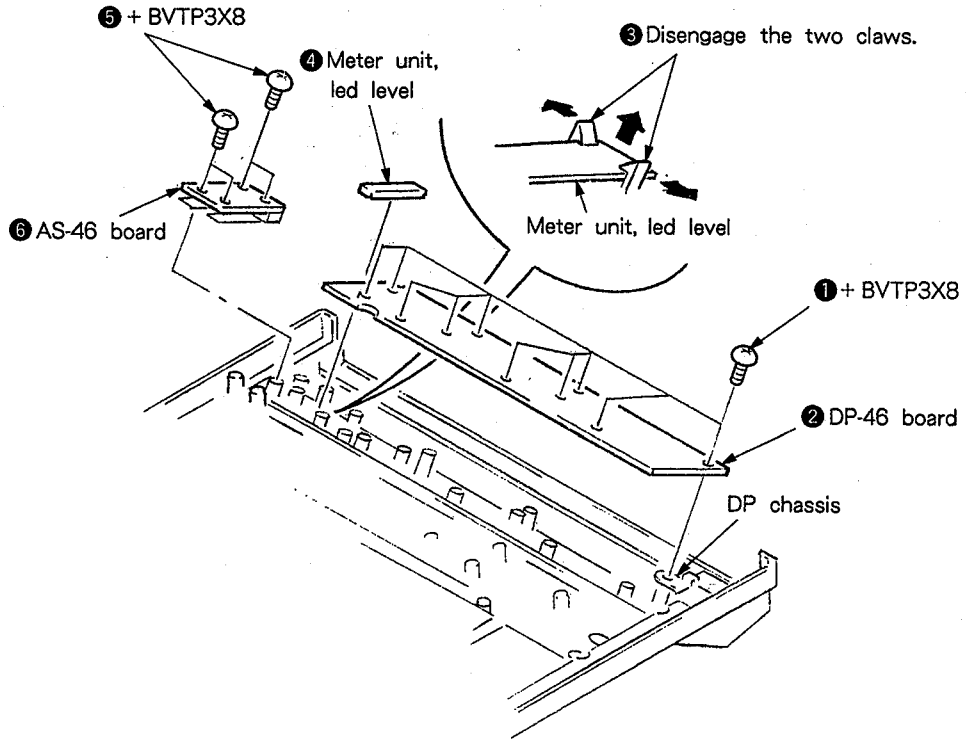
8. REMOVAL OF SEARCH DIAL BLOCK ASSY



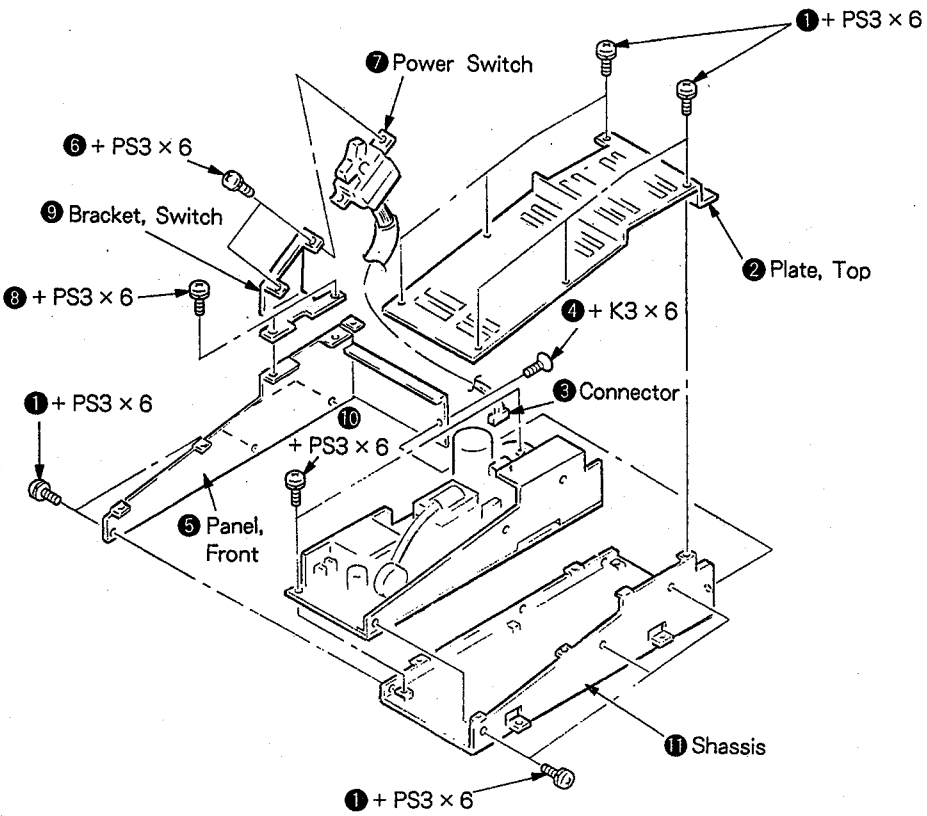
9. REMOVAL OF KS-15, CP-64, JS-25 BOARD



10. REMOVAL OF DP-46, AS-46 BOARD AND METER UNIT, LED LEVEL

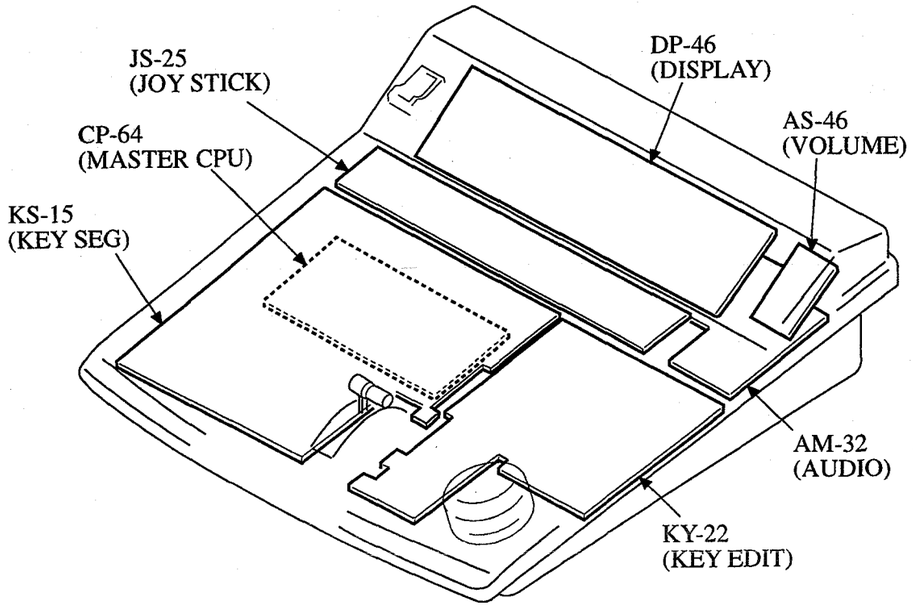


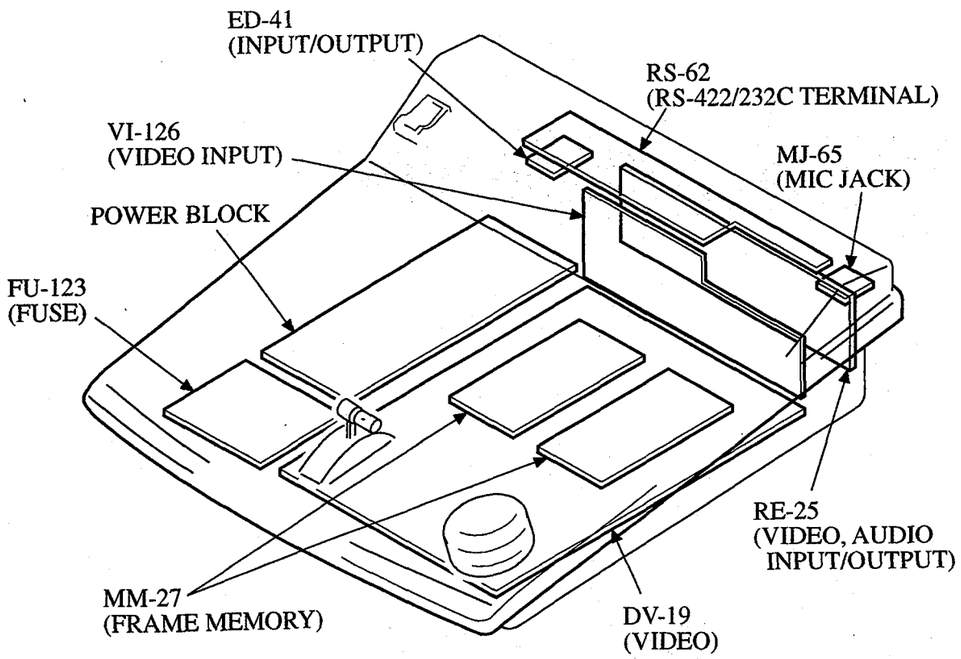
11. REMOVAL OF PARTS IN POWER SUPPLY BLOCK



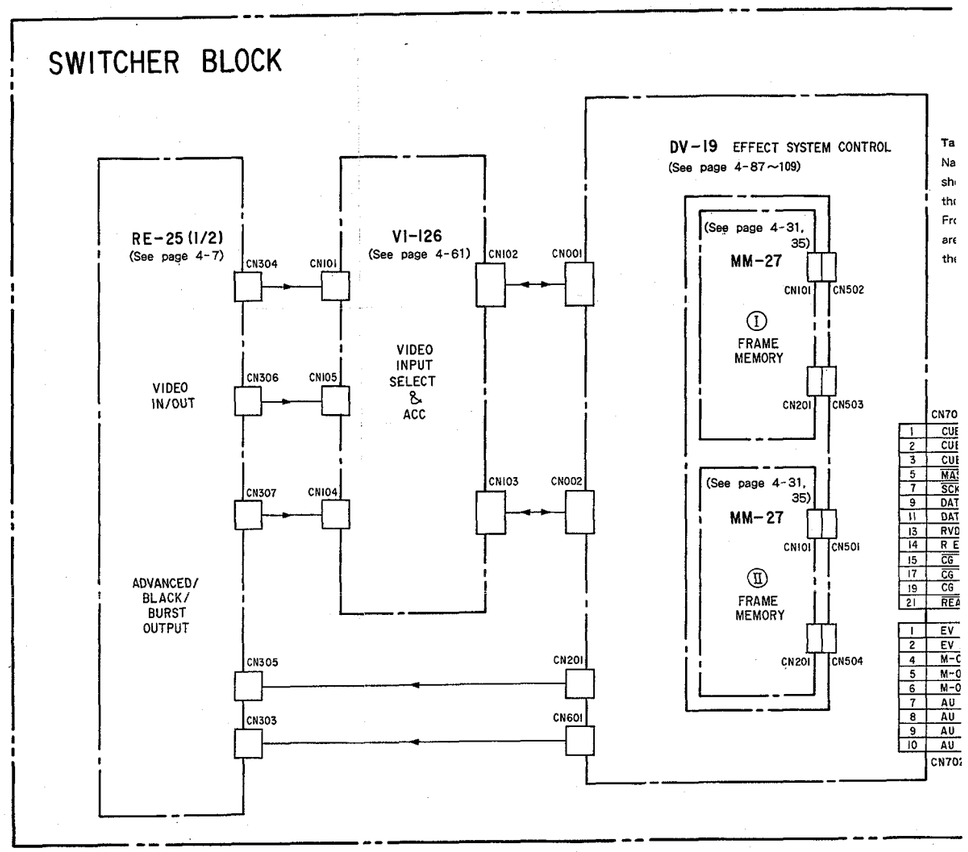
SECTION 3
DIAGRAMS

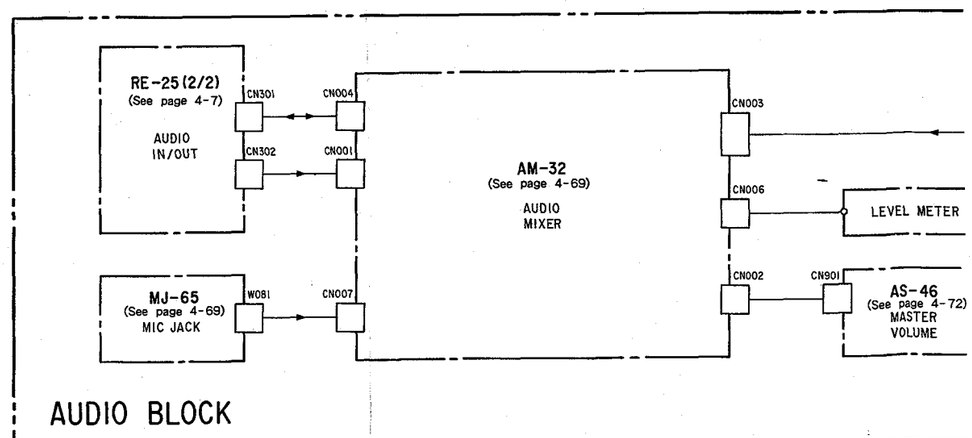
1. CIRCUIT BOARDS LOCATION





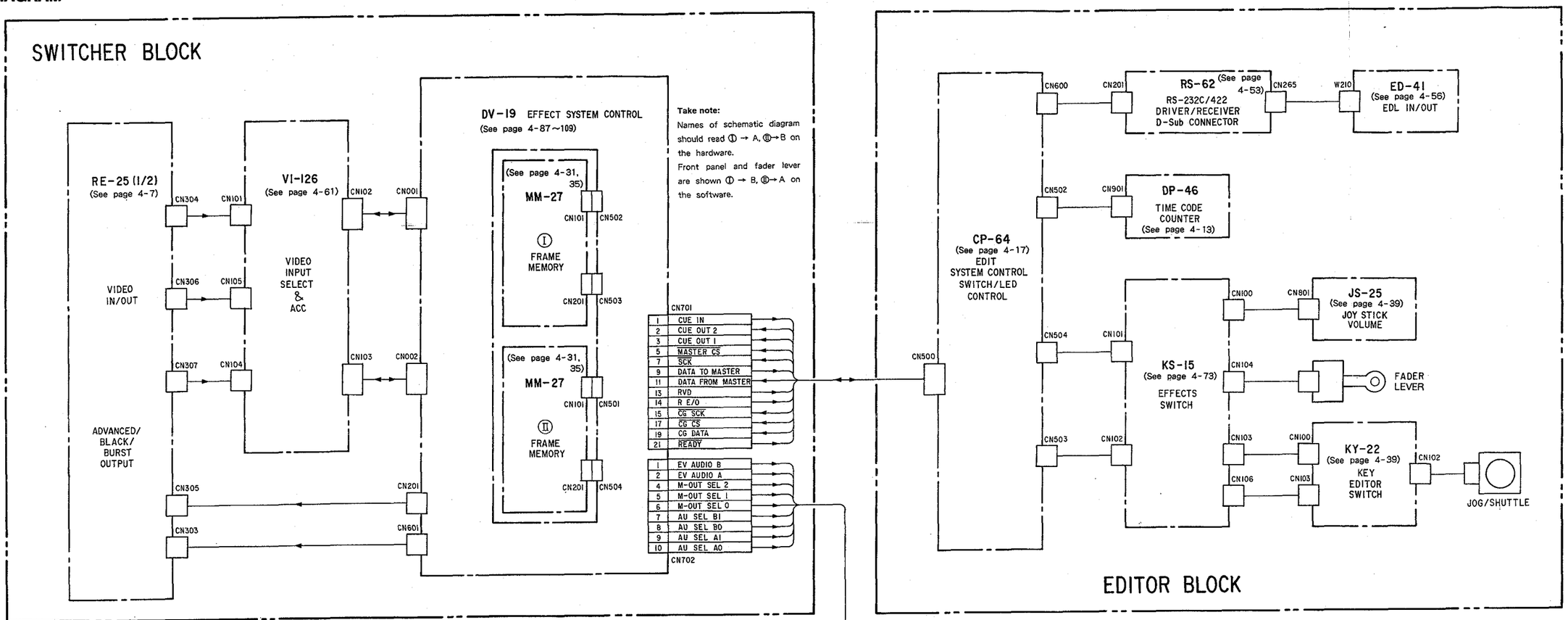
2. OVERALL BLOCK DIAGRAM

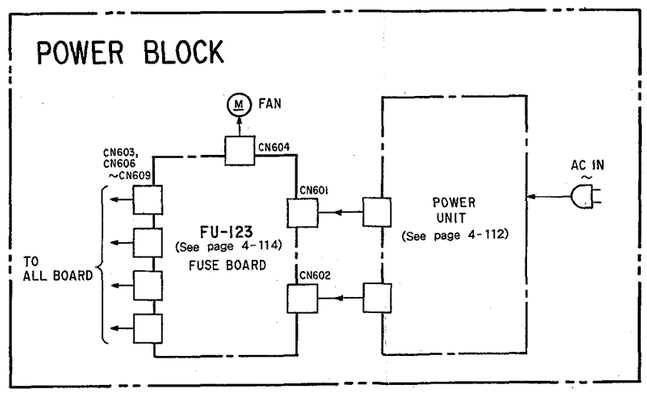


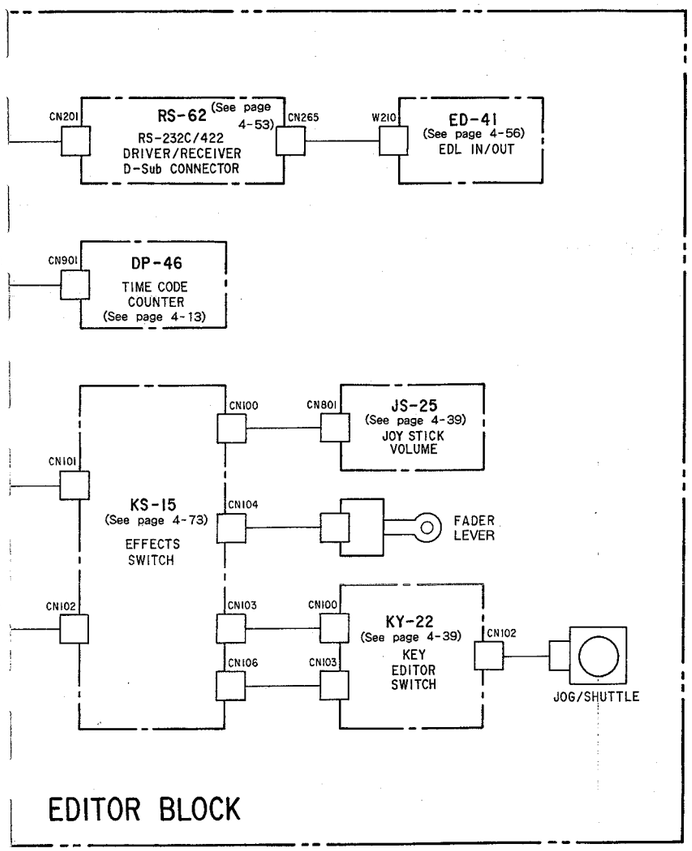


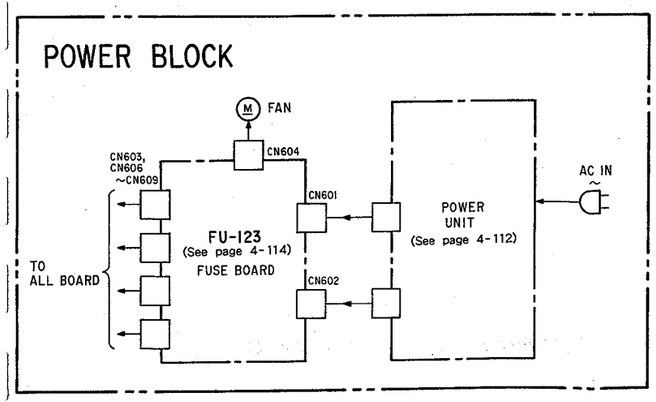
16

K DIAGRAM


SWITCHER BLOCK
RE-25 (1/2)
(See page 4-7)
CN304
CN101
CN306
CN105
CN307
CN104
VIDEO IN/OUT
ADVANCED/ BLACK/ BURST OUTPUT
VI-126
(See page 4-61)
CN102
CN001
CN103
CN002
VIDEO INPUT SELECT & ACC
CN305
CN201
CN303
CN601
DV-19 EFFECT SYSTEM CONTROL
(See page 4-87~109)
(See page 4-31, 35)
MM-27
CN101
CN502
Ⅰ
FRAME MEMORY
CN201
CN503
(See page 4-31, 35)
MM-27
CN101
CN501
Ⅱ
FRAME MEMORY
CN201
CN504
CN701
1 CUE IN
2 CUE OUT 2
3 CUE OUT 1
5 MASTER CS
7 SCK
9 DATA TO MASTER
11 DATA FROM MASTER
13 RVD
14 R E/O
15 CG SCK
17 CG CS
19 CG DATA
21 READY
1 EV AUDIO B
2 EV AUDIO A
4 M-OUT SEL 2
5 M-OUT SEL 1
6 M-OUT SEL 0
7 AU SEL BI
8 AU SEL BO
9 AU SEL AI
10 AU SEL AO
CN702
Take note:
Names of schematic diagram should read Ⅰ → A, Ⅱ→B on the hardware.
Front panel and fader lever are shown Ⅰ → B, Ⅱ→A on the software.
CN500
CP-64
(See page 4-17)
EDIT SYSTEM CONTROL SWITCH/LED CONTROL
CN600
CN201
RS-62 (See page 4-53)
RS-232C/422 DRIVER/RECEIVER D-Sub CONNECTOR
CN265
W210
ED-41
(See page 4-56)
EDL IN/OUT
CN502
CN901
DP-46
TIME CODE COUNTER
(See page 4-13)
CN504
CN101
KS-15
(See page 4-73)
EFFECTS SWITCH
CN100
CN801
JS-25
(See page 4-39)
JOY STICK VOLUME
CN104
FADER LEVER
CN503
CN102
CN103
CN100
KY-22
(See page 4-39)
KEY EDITOR SWITCH
CN102
JOG/SHUTTLE
CN106
CN103
EDITOR BLOCK
RE-25 (2/2)
(See page 4-7)
CN301
CN004
AUDIO IN/OUT
CN302
CN001
AM-32
(See page 4-69)
AUDIO MIXER
CN003
CN006
LEVEL METER
CN002
CN901
AS-46
(See page 4-72)
MASTER VOLUME
MJ-65
(See page 4-69)
MIC JACK
W081
CN007
AUDIO BLOCK


POWER BLOCK
M FAN
CN604
CN603, CN606 ~CN609
TO ALL BOARD
FU-123
(See page 4-114)
FUSE BOARD
CN601
CN602
POWER UNIT
(See page 4-112)
AC IN





[DV-19 Board CN701, CN702 Description]

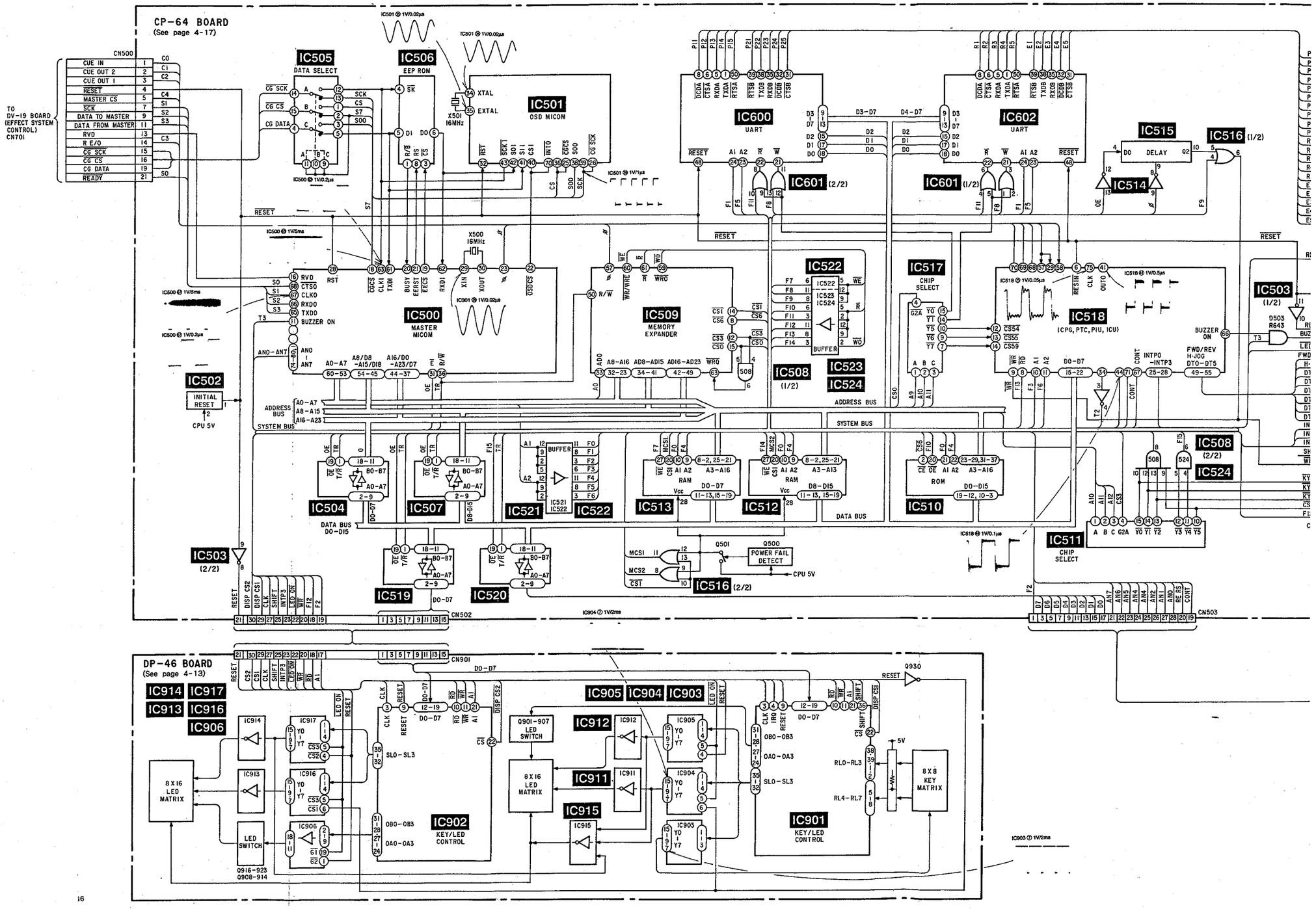
• CN701 Communication between CP-64 board and DV-19 board

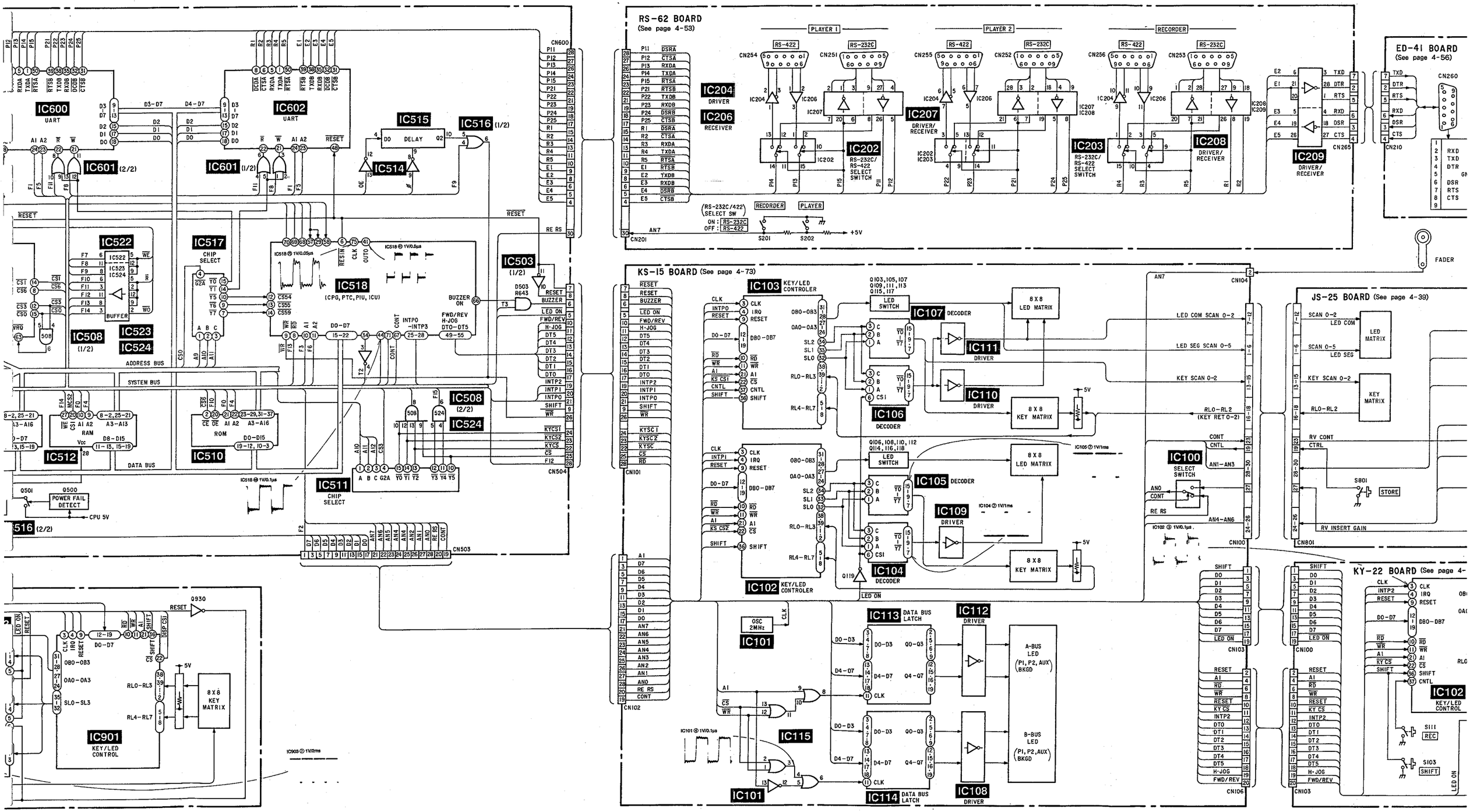
PIN	Name	Direction	Description
1	CUE IN	DV-19→CP-64	When an external pulse is input to the CUE IN connector, the same function as if the AUTO TRANS button is pressed is carried out. The pulse input is received by transistor circuit in DV-19 and sent to CP-64 board as it is.
2	CUE OUT2	CP-64→DV-19	The trigger pulse to external peripheral equipment. This pulse is output from CP-64 board, buffered by DV-19 and output to the CUE OUT terminal.
3	CUE OUT1	CP-64→DV-19	The trigger pulse to external peripheral equipment. This pulse is output from CP-64 board, buffered by DV-19 and output to the CUE OUT terminal.
5	$\overline{\text{MASTER CS}}$	CP-64→DV-19	The serial communication chip select signal from CP-64 master microprocessor (IC500) to the DV-19 main microprocessor (IC730).
7	$\overline{\text{SCK}}$	CP-64→DV-19	The serial communication clock from CP-64 master microprocessor (IC500) to the DV-19 main microprocessor (IC730).
9	DATA TO MASTER	DV-19→CP-64	The serial communication data from DV-19 main microprocessor (IC730) to the CP-64 master microprocessor (IC500).
11	DATA FROM-MASTER	CP-64→DV-19	The serial communication data from CP-64 master microprocessor (IC500) to the DV-19 main microprocessor (IC730).
13	RVD	DV-19→CP-64	VD signal of the video signal read system. The CP-64 master microprocessor determines the communication timing using this pulse rate.
14	R $\overline{\text{O}}$/E	DV-19→CP-64	Video signal read system L = Even, H = Odd pulse. The CP-64 master microprocessor comes to know whether the present timing is even or odd from this signal.
15	$\overline{\text{CG SCK}}$	CP-64→DV-19	The serial communication with the DV-19 character generator (IC206) IC. { $\overline{\text{SCK}}$: clock $\overline{\text{CS}}$: chip select DATA : data { During the normal counter display mode : CP-64 OSD microprocessor (IC501) is output. During the menu mode : CP-64 master microprocessor (IC500) is output. }
17	$\overline{\text{CG CS}}$	CP-64→DV-19	
19	CG DATA	CP-64→DV-19	
21	$\overline{\text{READY}}$	DV-19→CP-64	DV-19 microprocessor (IC730) notifies to the CP-64 master microprocessor (IC500) whether the serial communication can be accepted or not.

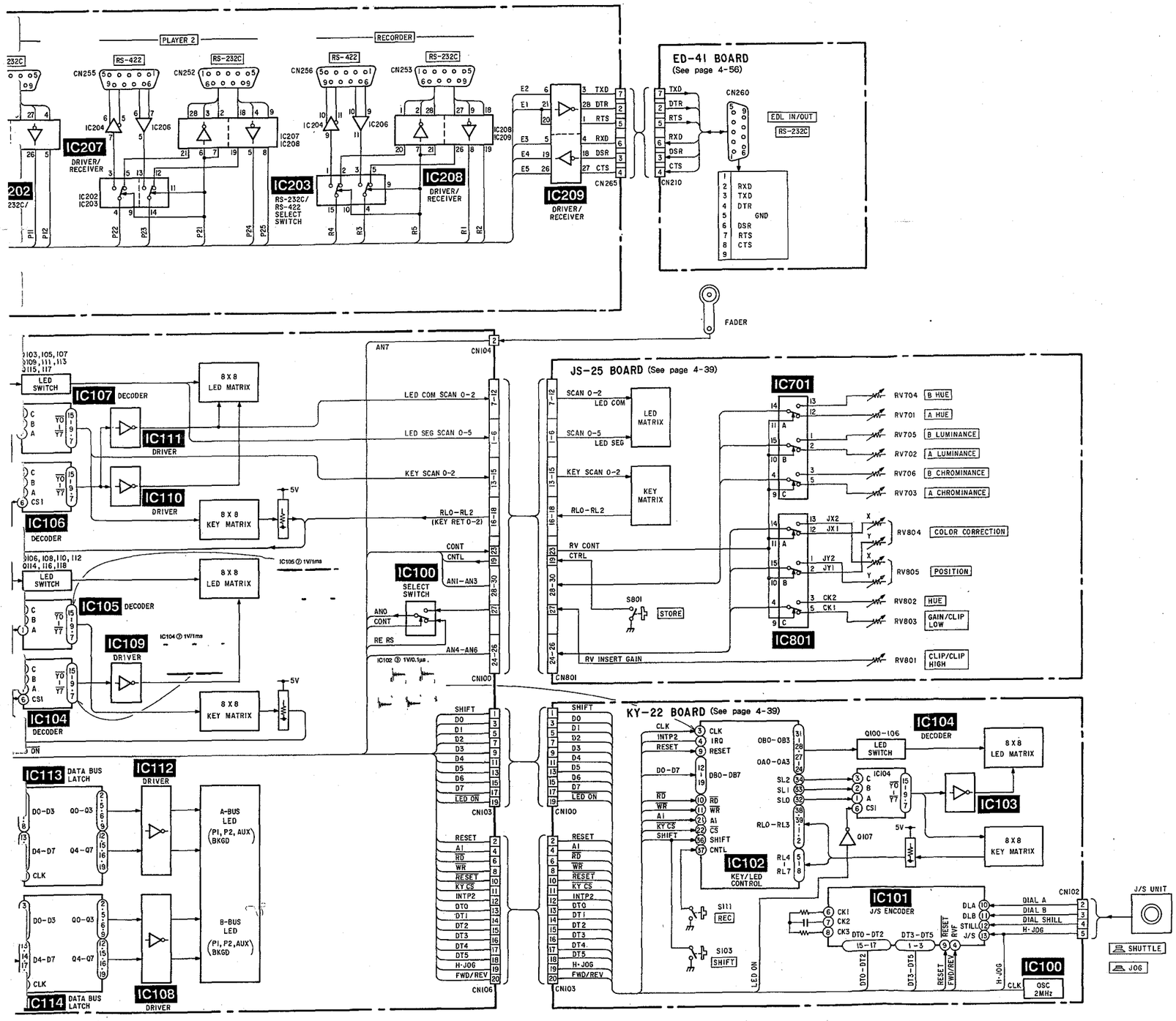
• CN702 Communication between AM-32 board and DV-19 board

PIN	Name	Direction	Description
1	EV AUDIO B	DV-19→AM-32	ATT level control of the B-Bus electronic volume control (AM-32, IC513). (DC voltage between 0 – 5V)
2	EV AUDIO A	DV-19→AM-32	ATT level control of the A-Bus electronic volume control (AM-32, IC512). (DC voltage between 0 – 5V)
4	M-OUT SEL 2	DV-19→AM-32	Audio monitor output audio select logic → IC616, IC518
5	M-OUT SEL 1	DV-19→AM-32	Logic is inverted in the AM-32 board, and level is converted from 0 – 5 to 8 – 0 [V].
6	M-OUT SEL 0	DV-19→AM-32	
7	AU SEL B1	DV-19→AM-32	Audio B-Bus source audio select logic → IC511
8	AU SEL B0	DV-19→AM-32	Logic is inverted in the AM-32 board, and level is converted from 0 – 5 to 8 – 0 [V].
9	AU SEL A1	DV-19→AM-32	Audio A-Bus source audio select logic → IC510
10	AU SEL A0	DV-19→AM-32	Logic is inverted in the AM-32 board, and level is converted from 0 – 5 to 8 – 0 [V].

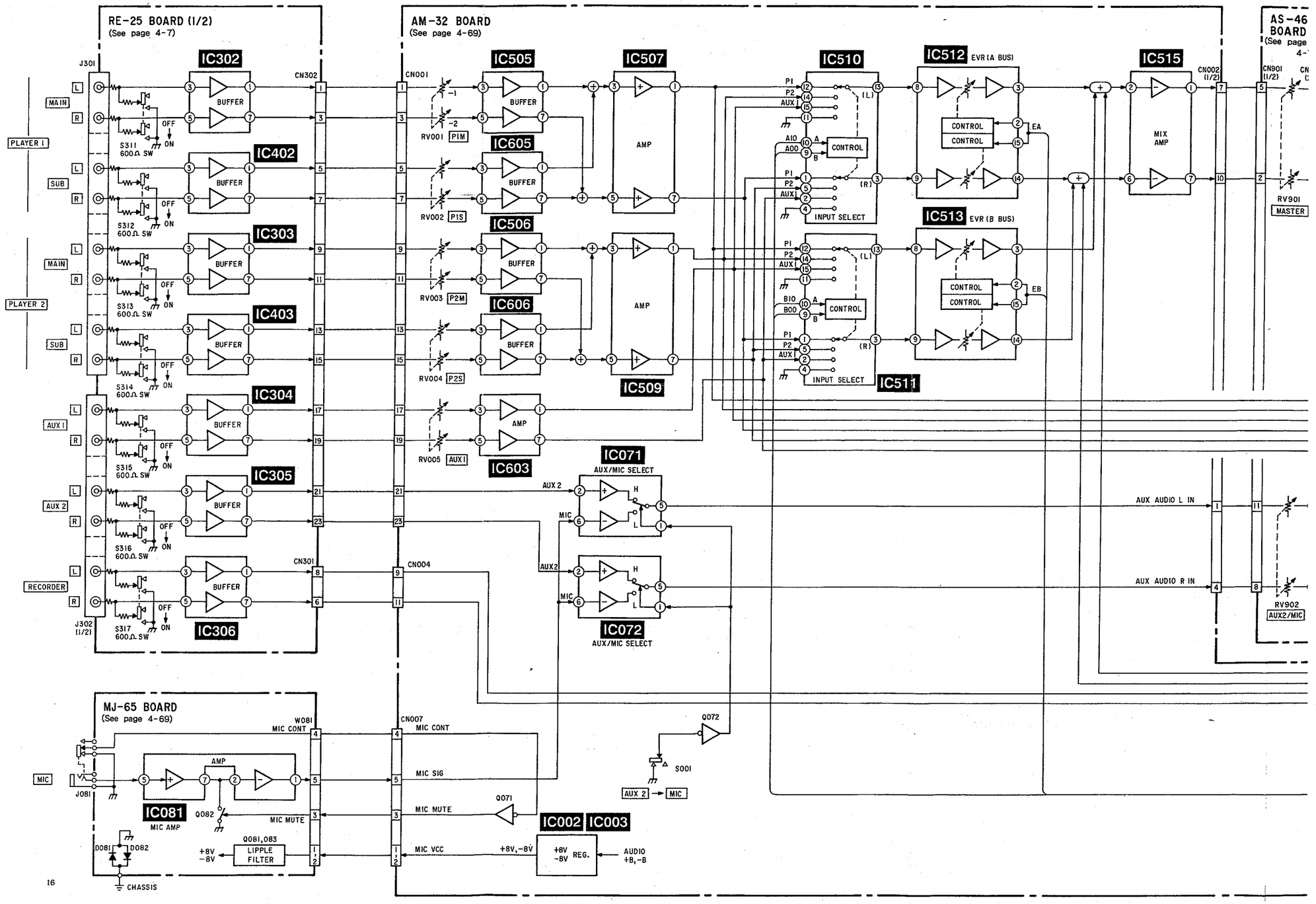
3. EDITOR BLOCK DIAGRAM

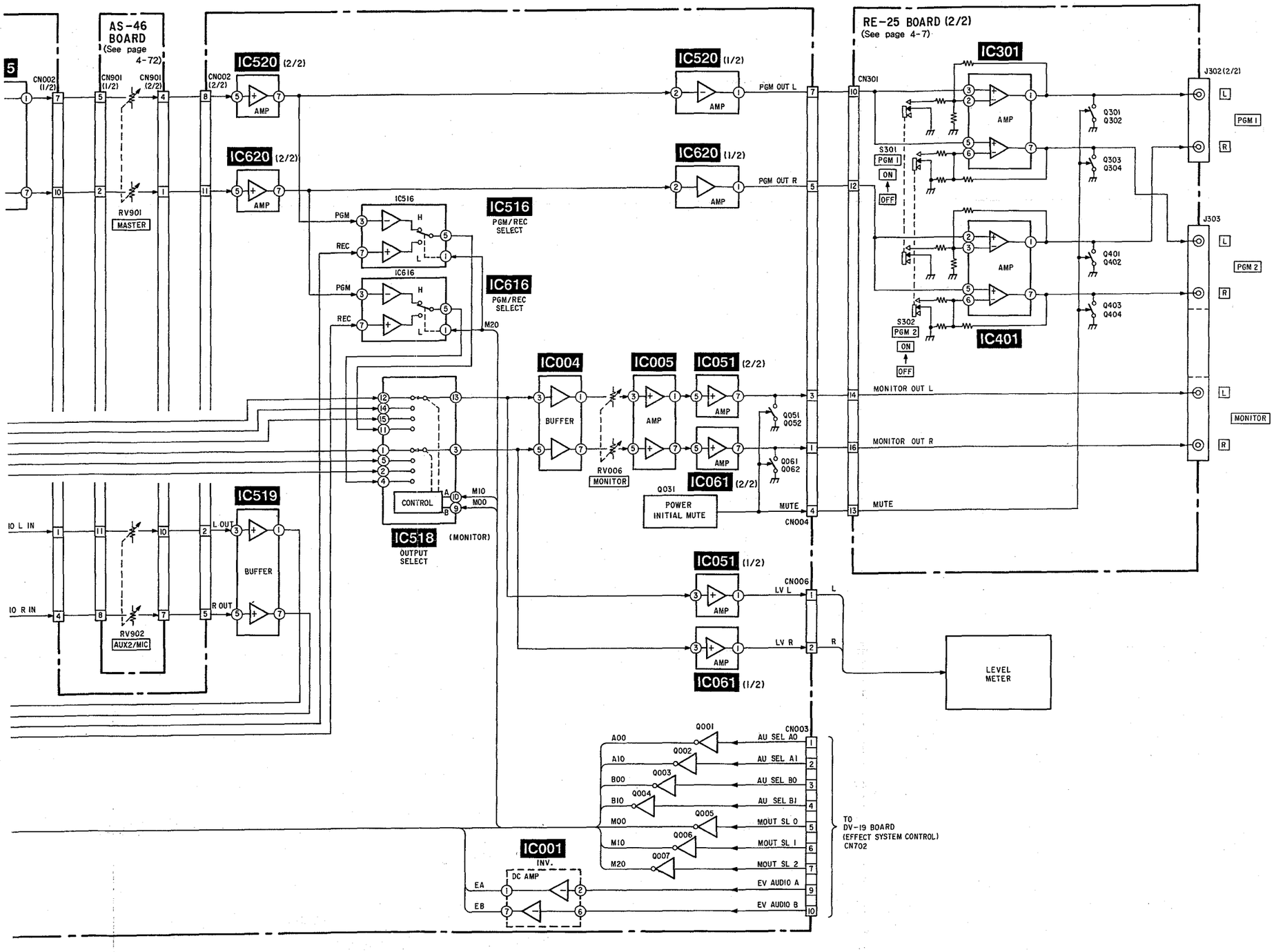



RS-62 BOARD
(See page 4-53)
ED-41 BOARD
(See page 4-56)
KS-15 BOARD (See page 4-73)
JS-25 BOARD (See page 4-39)
KY-22 BOARD (See page 4-
IC600
UART
IC602
UART
IC601 (2/2)
IC601 (1/2)
IC515
DELAY
IC516 (1/2)
IC514
IC522
IC523
IC524
IC508
(1/2)
IC517
CHIP SELECT
IC518
(CPG, PTC, PIU, ICU)
IC503
(1/2)
IC508
(2/2)
IC524
IC512
IC510
IC511
CHIP SELECT
IC516 (2/2)
POWER FAIL DETECT
IC901
KEY/LED CONTROL
IC204
DRIVER
IC206
RECEIVER
IC202
RS-232C/ RS-422 SELECT SWITCH
IC207
DRIVER/ RECEIVER
IC203
RS-232C/ RS-422 SELECT SWITCH
IC208
DRIVER/ RECEIVER
IC209
DRIVER/ RECEIVER
IC103
KEY/LED CONTROLER
IC102
KEY/LED CONTROLER
IC107
DECODER
IC111
DRIVER
IC110
DRIVER
IC106
DECODER
IC105
DECODER
IC109
DRIVER
IC104
DECODER
IC100
SELECT SWITCH
IC101
OSC 2MHz
IC113
DATA BUS LATCH
IC112
DRIVER
IC115
IC114
DATA BUS LATCH
IC108
DRIVER
8 X 8 LED MATRIX
8 X 8 KEY MATRIX
A-BUS LED (P1, P2, AUX BKGD)
B-BUS LED (P1, P2, AUX BKGD)
LED COM SCAN 0-2
LED SEG SCAN 0-5
KEY SCAN 0-2
RL0-RL2 (KEY RET 0-2)
RV CONT
CTRL
RV INSERT GAIN
STORE
FADER
RESET
ADDRESS BUS
SYSTEM BUS
DATA BUS
CPU 5V
+5V

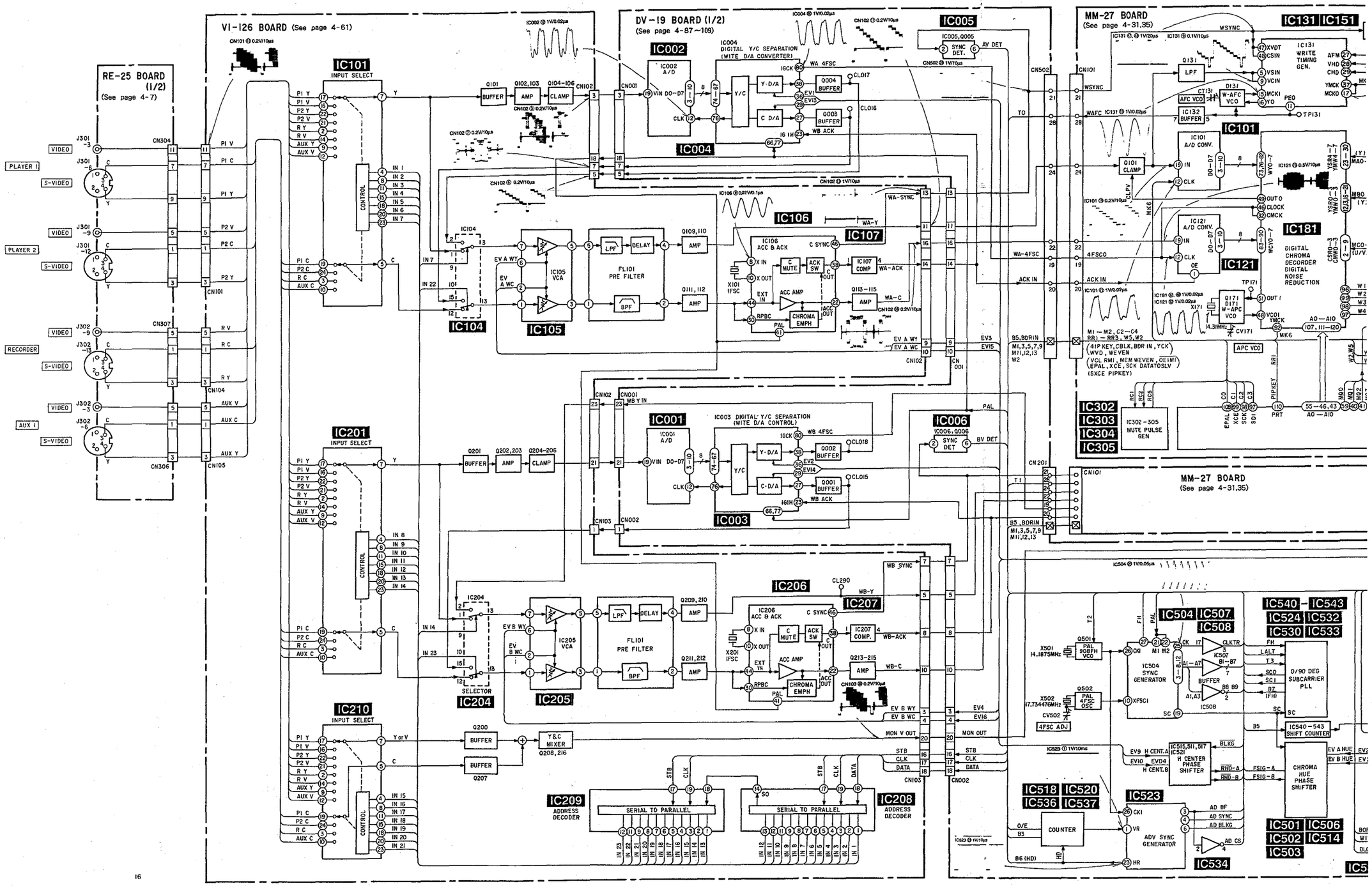

PLAYER 2
RECORDER
RS-422
RS-232C
CN255
CN252
CN256
CN253
IC207
DRIVER/
RECEIVER
IC202
IC203
RS-232C/
RS-422
SELECT
SWITCH
IC208
DRIVER/
RECEIVER
IC209
DRIVER/
RECEIVER
CN265
ED-41 BOARD
(See page 4-56)
CN260
EDL IN/OUT
RS-232C
CN210
TXD
DTR
RTS
RXD
DSR
CTS
GND
FADER
LED
SWITCH
IC107 DECODER
8 X 8
LED MATRIX
IC111
DRIVER
IC110
DRIVER
8 X 8
KEY MATRIX
IC106
DECODER
IC105 DECODER
IC109
DRIVER
IC104
DECODER
IC100
SELECT
SWITCH
AN7
CN104
LED COM SCAN 0-2
LED SEG SCAN 0-5
KEY SCAN 0-2
RL0-RL2
(KEY RET 0-2)
CONT
CNTL
AN1-AN3
AN0
CONT
RE RS
AN4-AN6
CN100
SHIFT
DO
D1
D2
D3
D4
D5
D6
D7
LED ON
CN103
RESET
A1
RD
WR
RESET
KY CS
INTP2
DTO
DT1
DT2
DT3
DT4
DT5
H-JOG
FWD/REV
CN106
JS-25 BOARD (See page 4-39)
SCAN 0-2
LED COM
SCAN 0-5
LED SEG
KEY SCAN 0-2
RL0-RL2
RV CONT
CTRL
S801
STORE
RV INSERT GAIN
CN801
IC701
RV704 B HUE
RV701 A HUE
RV705 B LUMINANCE
RV702 A LUMINANCE
RV706 B CHROMINANCE
RV703 A CHROMINANCE
RV804 COLOR CORRECTION
RV805 POSITION
RV802 HUE
RV803 GAIN/CLIP LOW
RV801 CLIP/CLIP HIGH
IC801
KY-22 BOARD (See page 4-39)
CLK
INTP2
RESET
DO-D7
DB0-DB7
RD
WR
A1
KY CS
SHIFT
CNTL
OB0-OB3
OA0-OA3
SL2
SL1
SL0
RL0-RL3
RL4
RL7
IC102
KEY/LED
CONTROL
Q100-106
LED
SWITCH
IC104
DECODER
8 X 8
LED MATRIX
IC103
8 X 8
KEY MATRIX
Q107
5V
S111
REC
S103
SHIFT
IC101
J/S ENCODER
CK1
CK2
CK3
DT0-DT2
DT3-DT5
15-17
1-3
RESET
FWD/REV
H-JOG
CLK
IC100
OSC
2MHz
CN102
J/S UNIT
DIAL A
DIAL B
DIAL SHILL
H-JOG
J/S
SHUTTLE
JOG
IC113 DATA BUS LATCH
IC112
DRIVER
A-BUS
LED
(P1, P2, AUX)
(BKGD)
B-BUS
LED
(P1, P2, AUX)
(BKGD)
IC108
DRIVER
IC114 DATA BUS LATCH
DO-D3
Q0-Q3
D4-D7
Q4-Q7
CLK

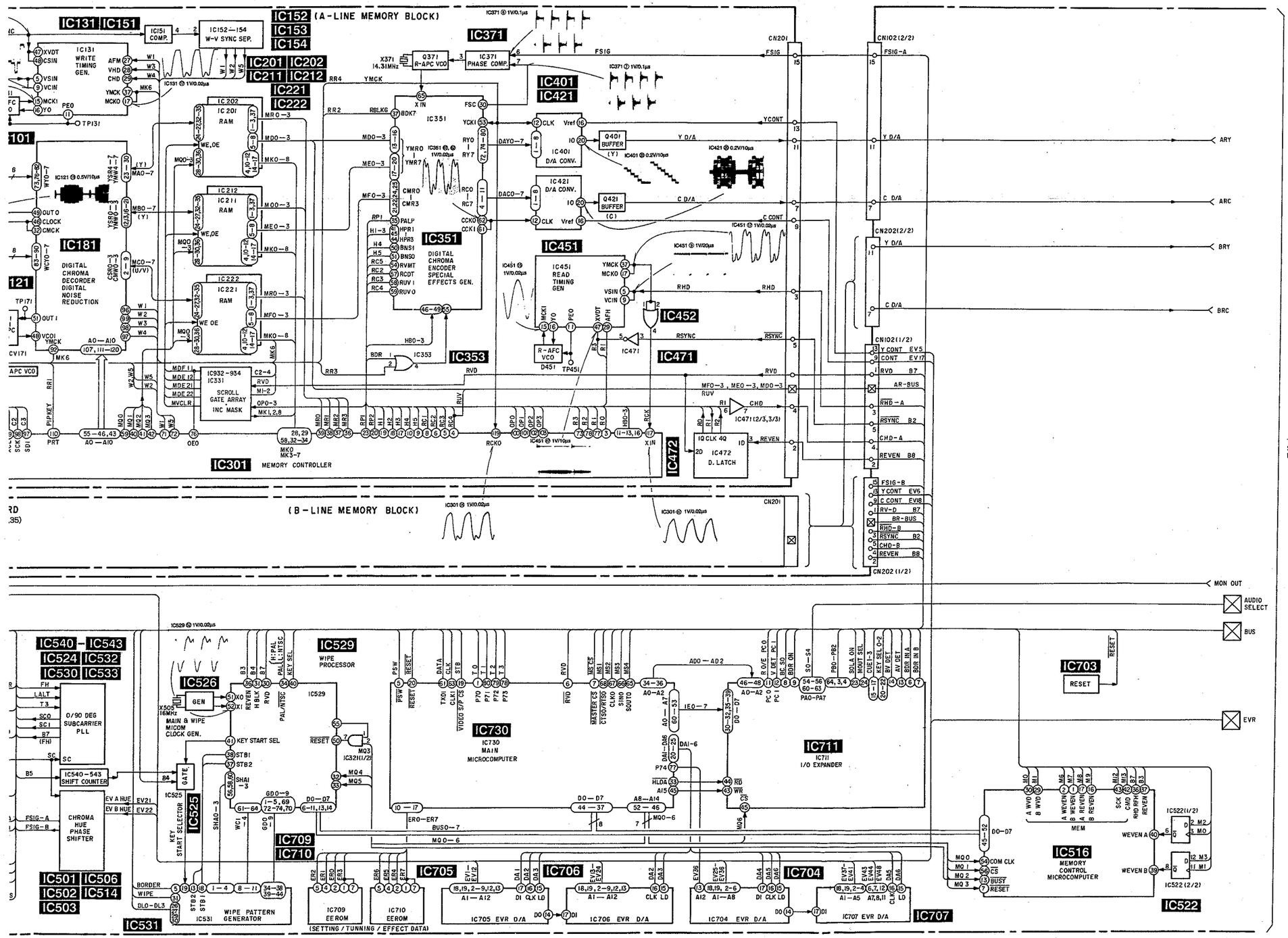
4. AUDIO BLOCK DIAGRAM



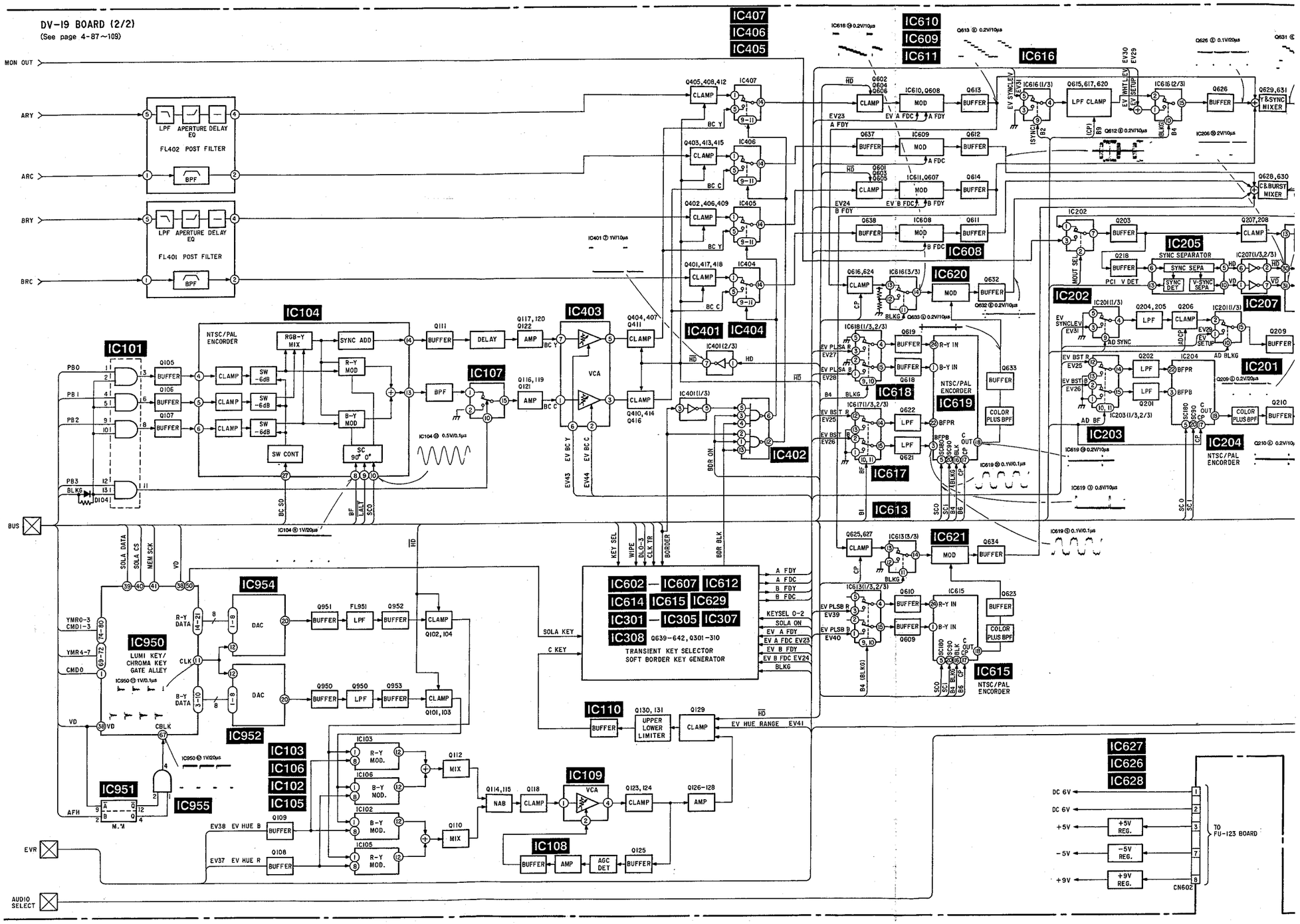

AS-46 BOARD
(See page 4-72)
CN002 (1/2)
CN002 (2/2)
CN901 (1/2)
CN901 (2/2)
RV901
MASTER
IC520 (2/2)
IC620 (2/2)
AMP
IC516
PGM
REC
H
L
IC516
PGM/REC SELECT
IC616
IC616
PGM/REC SELECT
M20
IC520 (1/2)
IC620 (1/2)
PGM OUT L
PGM OUT R
IC004
BUFFER
IC005
AMP
IC051 (2/2)
Q051
Q052
Q061
Q062
RV006
MONITOR
IC061 (2/2)
Q031
POWER INITIAL MUTE
MUTE
CN004
CONTROL
M10
M00
IC518
OUTPUT SELECT
(MONITOR)
IC519
IO L IN
IO R IN
L OUT
R OUT
BUFFER
RV902
AUX2/MIC
RE-25 BOARD (2/2)
(See page 4-7)
CN301
IC301
IC401
S301
PGM 1
ON
OFF
S302
PGM 2
Q301
Q302
Q303
Q304
Q401
Q402
Q403
Q404
J302(2/2)
J303
L
R
PGM 1
PGM 2
MONITOR OUT L
MONITOR OUT R
MONITOR
IC051 (1/2)
IC061 (1/2)
CN006
LV L
LV R
LEVEL METER
Q001
Q002
Q003
Q004
Q005
Q006
Q007
A00
A10
B00
B10
M00
M10
M20
CN003
AU SEL A0
AU SEL A1
AU SEL B0
AU SEL B1
MOUT SL 0
MOUT SL 1
MOUT SL 2
IC001
INV.
DC AMP
EA
EB
EV AUDIO A
EV AUDIO B
TO DV-19 BOARD (EFFECT SYSTEM CONTROL) CN702

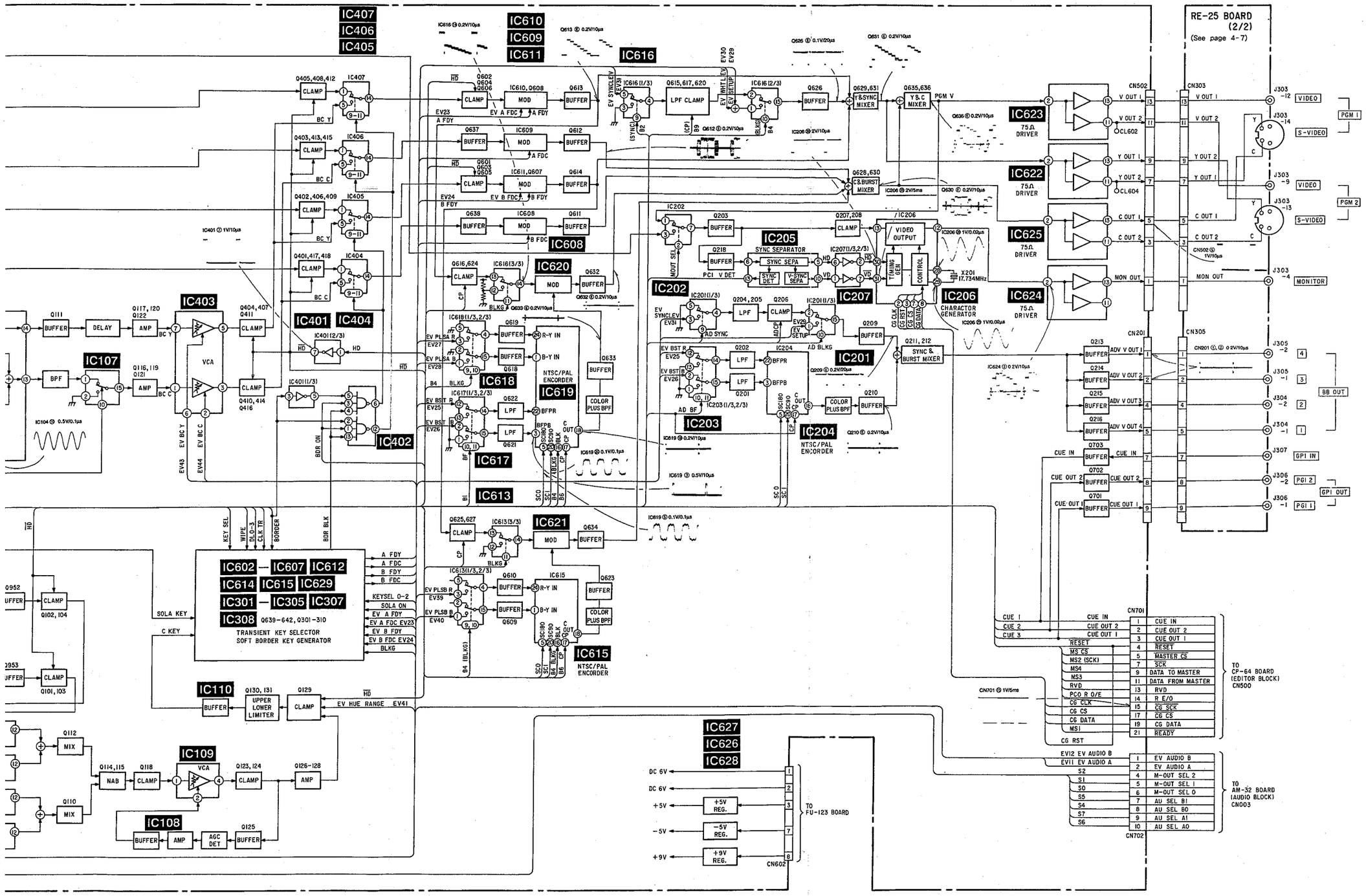
5. SWITCHER (1) BLOCK DIAGRAM




(A-LINE MEMORY BLOCK)
(B-LINE MEMORY BLOCK)
IC131 IC151
IC152 IC153 IC154
IC152—154 W-V SYNC SEP.
IC131 WRITE TIMING GEN.
IC201 IC202 IC211 IC212 IC221 IC222
IC371
IC371 PHASE COMP.
Q371 R-APC VCO
IC401 IC421
IC401 D/A CONV.
IC421 D/A CONV.
Q401 BUFFER
Q421 BUFFER
IC351
DIGITAL CHROMA ENCODER SPECIAL EFFECTS GEN.
IC451
IC451 READ TIMING GEN
IC452
IC471
IC472 D. LATCH
IC181
DIGITAL CHROMA DECORDER DIGITAL NOISE REDUCTION
IC202 RAM
IC212 RAM
IC222 RAM
IC353
IC301 MEMORY CONTROLLER
IC932-934 IC331 SCROLL GATE ARRAY INC MASK
IC540 IC543 IC524 IC532 IC530 IC533
0/90 DEG SUBCARRIER PLL
IC540-543 SHIFT COUNTER
CHROMA HUE PHASE SHIFTER
IC526
MAIN & WIPE MICOM CLOCK GEN.
IC525
KEY START SELECTOR
IC529 WIPE PROCESSOR
IC730 MAIN MICROCOMPUTER
IC711 I/O EXPANDER
IC703 RESET
IC516 MEMORY CONTROL MICROCOMPUTER
IC522
IC501 IC506 IC502 IC514 IC503
IC531 WIPE PATTERN GENERATOR
IC709 IC710
IC705 IC706 IC704 IC707
IC709 EEROM
IC710 EEROM
(SETTING / TUNNING / EFFECT DATA)
IC705 EVR D/A
IC706 EVR D/A
IC704 EVR D/A
IC707 EVR D/A
ARY
ARC
BRY
BRC
MON OUT
AUDIO SELECT
BUS
EVR
TO SWITCHER BLOCK (2/2)

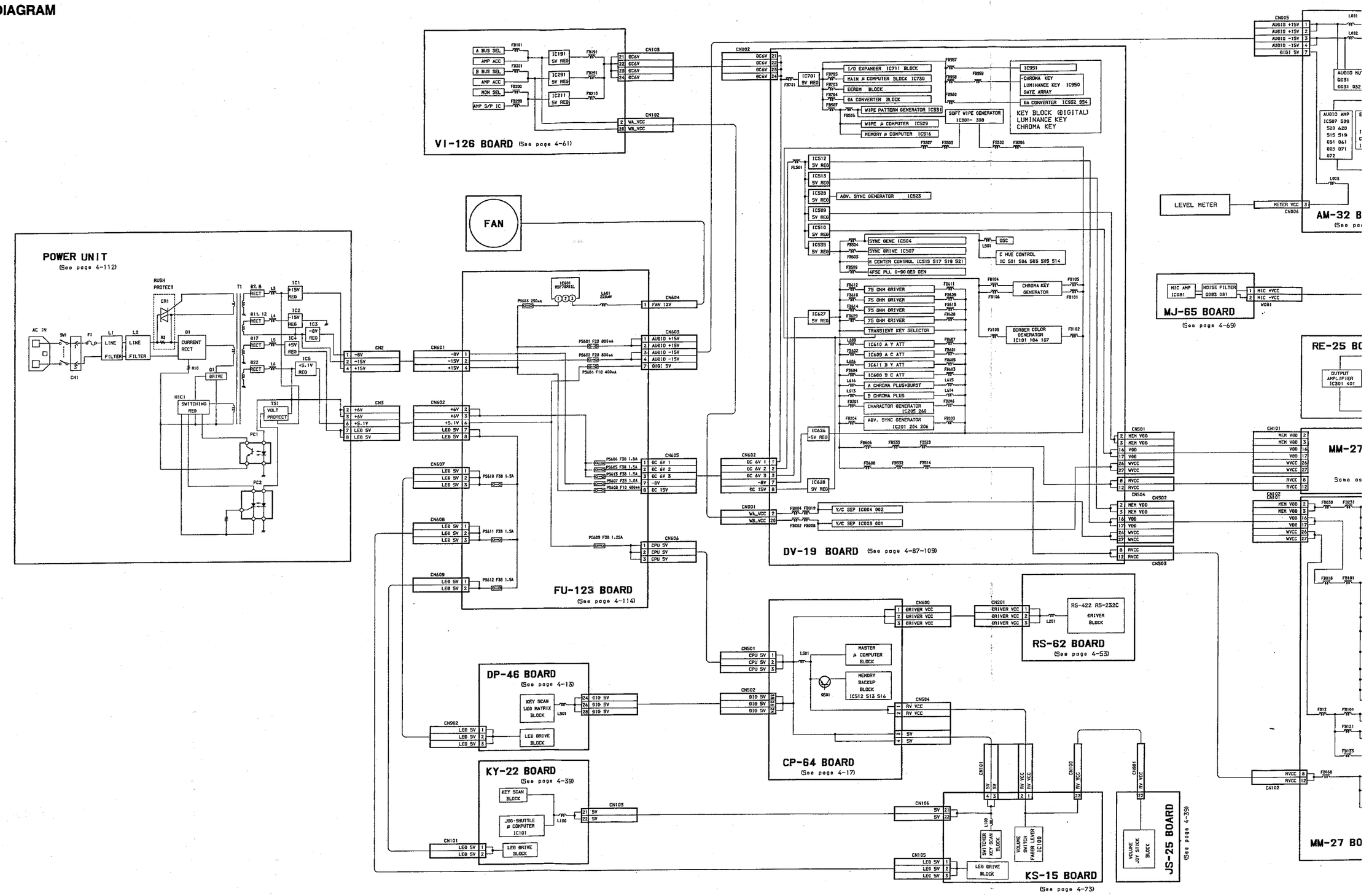
6. SWITCHER (2) BLOCK DIAGRAM

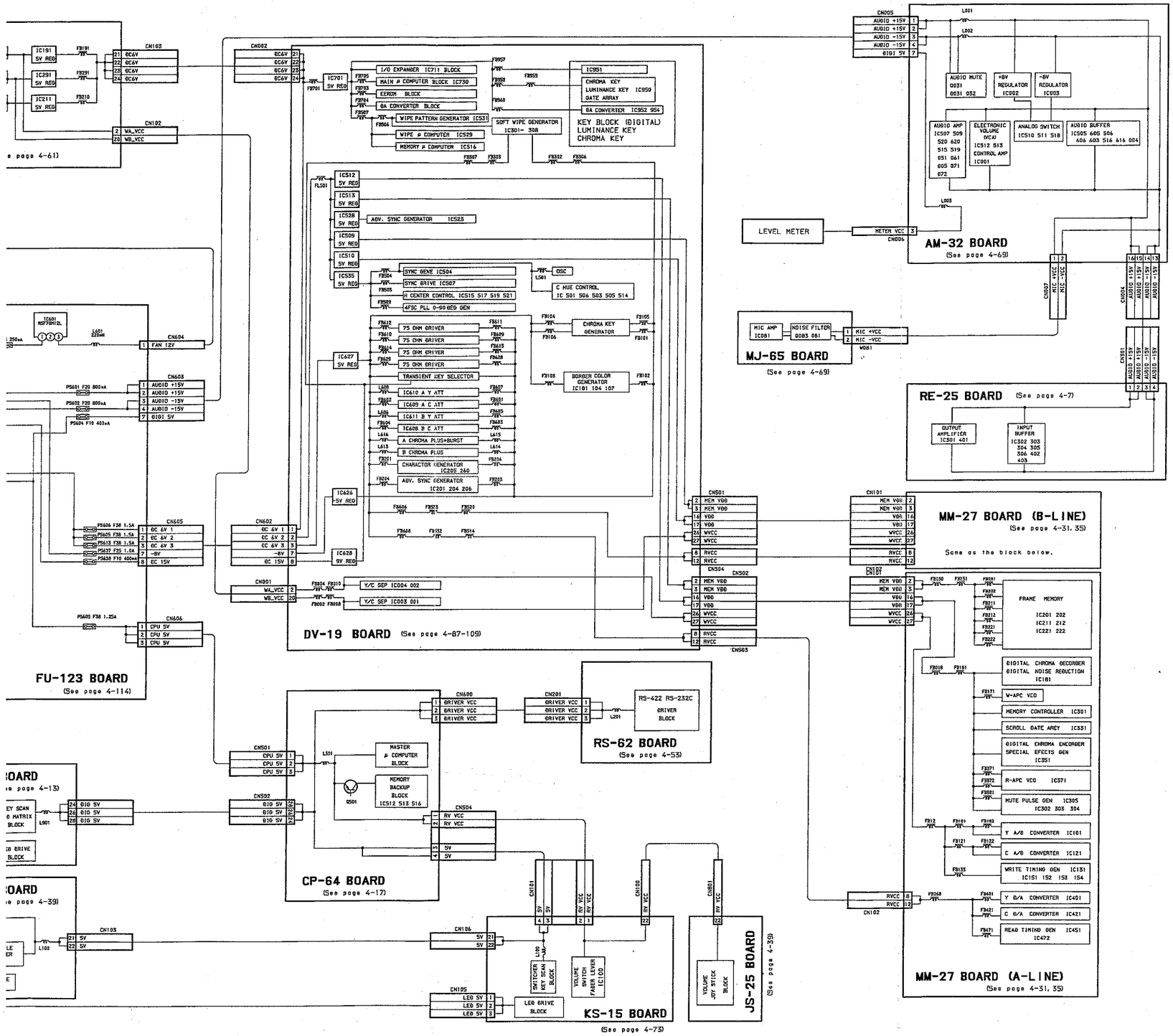



IC407
IC406
IC405
IC610
IC609
IC611
IC616
IC403
IC401
IC404
IC107
IC402
IC618
IC619
IC617
IC613
IC608
IC620
IC621
IC615
IC602 — IC607 IC612
IC614 IC615 IC629
IC301 — IC305 IC307
IC308 Q639-642, Q301-310
TRANSIENT KEY SELECTOR
SOFT BORDER KEY GENERATOR
IC110
IC109
IC108
IC202
IC205
IC207
IC206
IC201
IC203
IC204
IC623
IC622
IC625
IC624
IC627
IC626
IC628
RE-25 BOARD (2/2)
(See page 4-7)
CN502
CN303
CN201
CN305
CN701
CN702
CN602
TO CP-64 BOARD (EDITOR BLOCK) CN500
TO AM-32 BOARD (AUDIO BLOCK) CN003
TO FU-123 BOARD
VIDEO
S-VIDEO
MONITOR
BB OUT
GPI IN
GPI OUT
PGM 1
PGM 2

FXE-100P

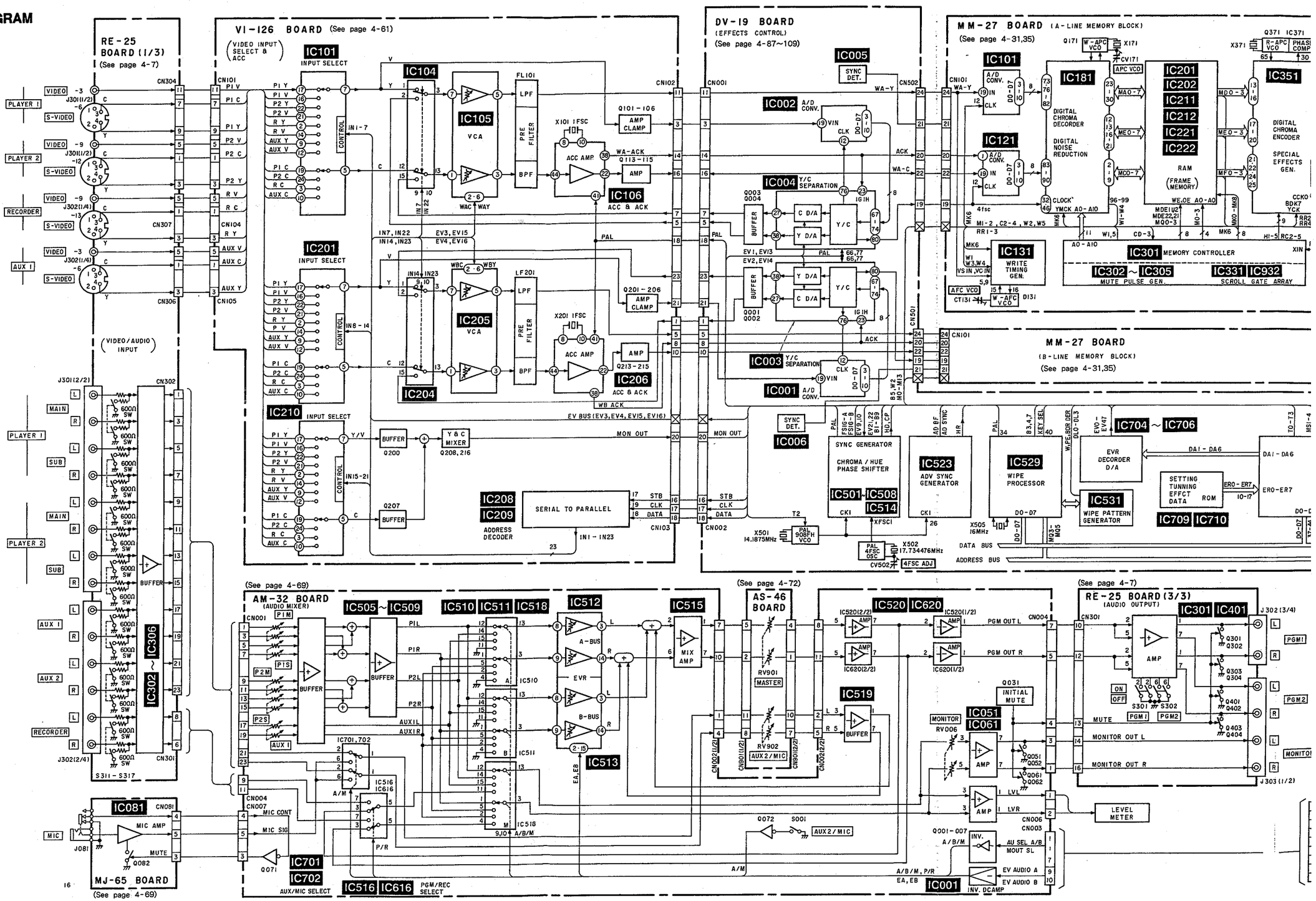
7. POWER BLOCK DIAGRAM

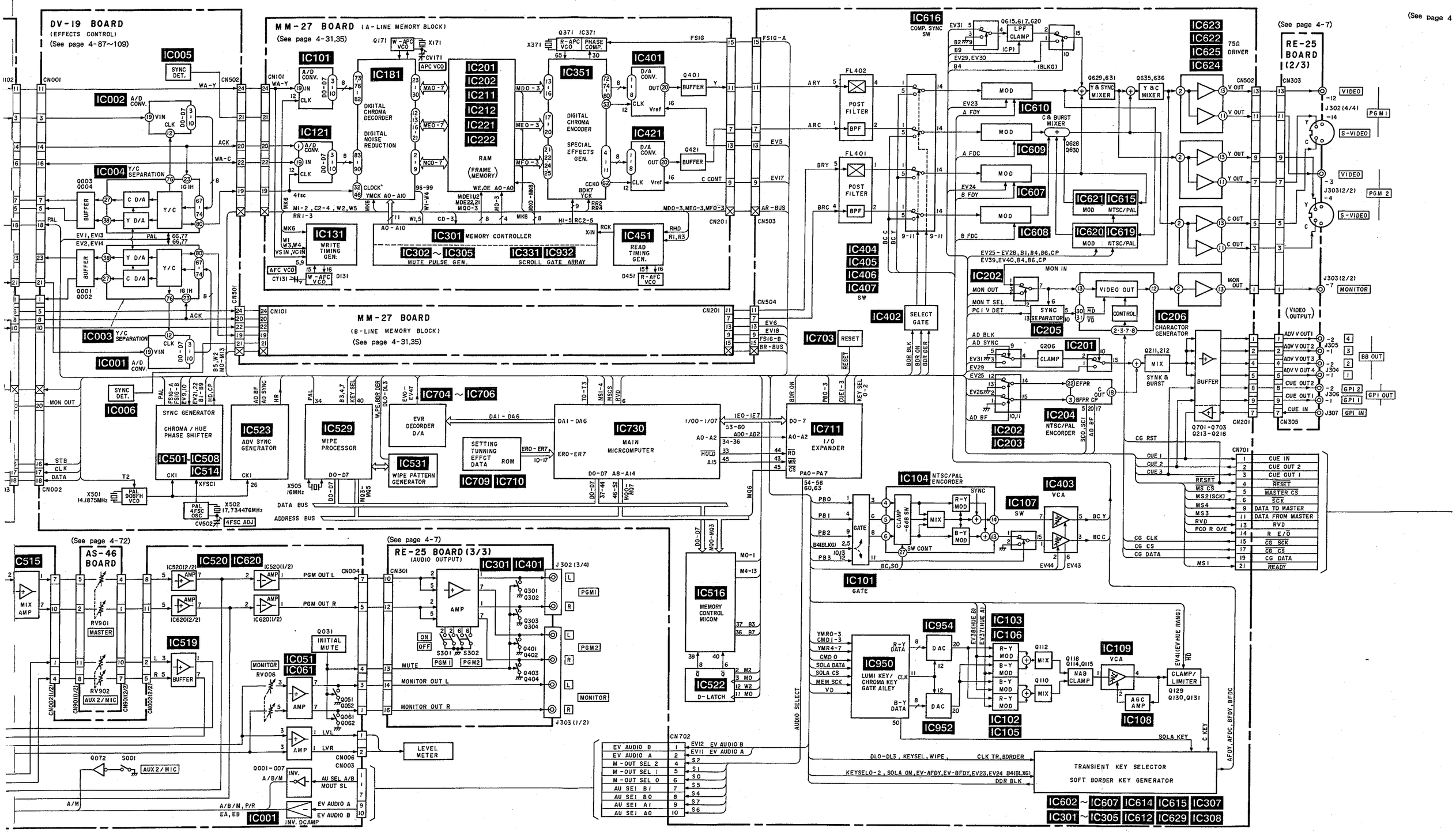


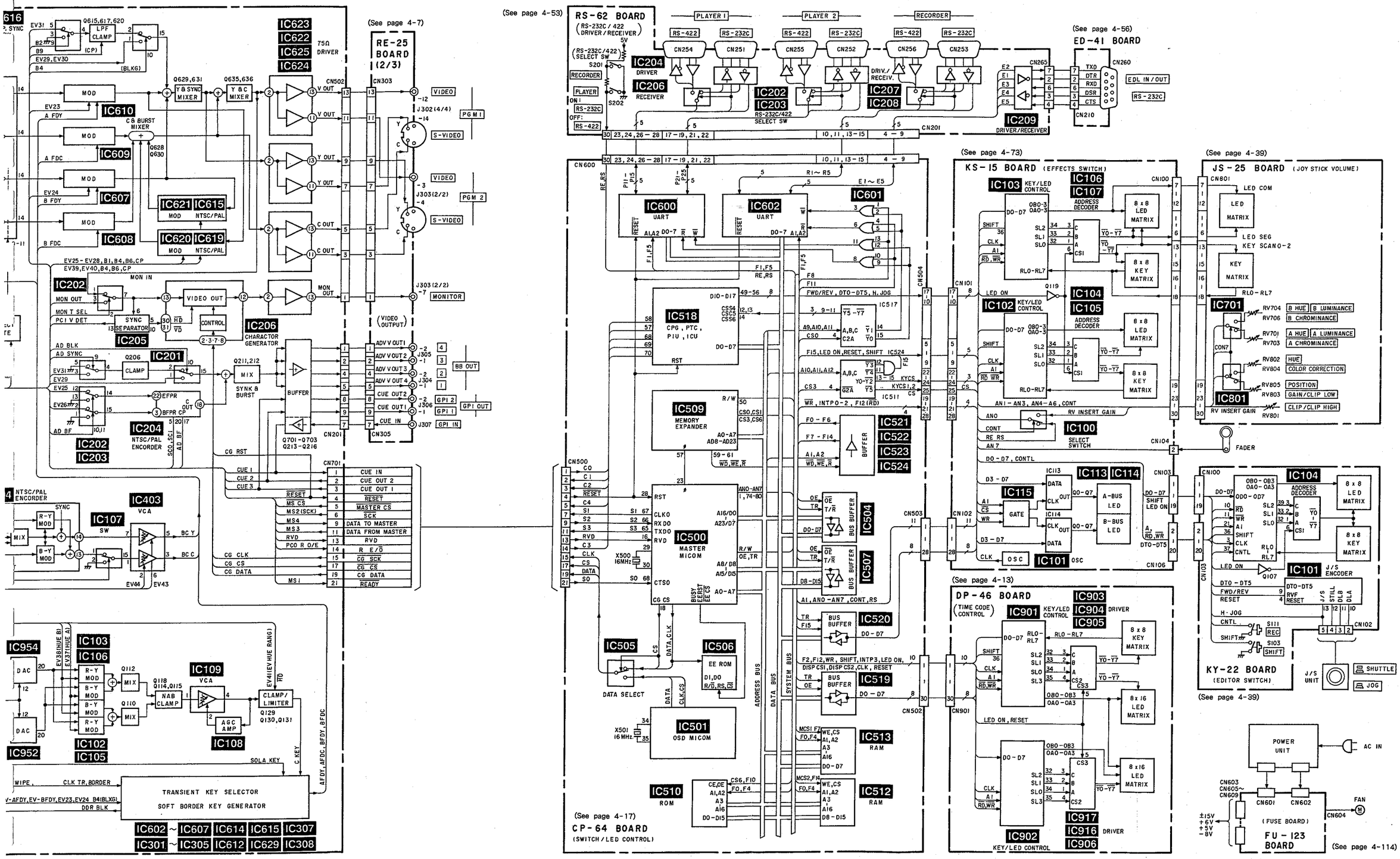


FU-123 BOARD
(See page 4-114)
DV-19 BOARD (See page 4-87-109)
KEY BLOCK (DIGITAL)
LUMINANCE KEY
CHROMA KEY
AM-32 BOARD
(See page 4-69)
LEVEL METER
MJ-65 BOARD
(See page 4-69)
RE-25 BOARD (See page 4-7)
MM-27 BOARD (B-LINE)
(See page 4-31, 35)
Same as the block below.
MM-27 BOARD (A-LINE)
(See page 4-31, 35)
RS-62 BOARD
(See page 4-53)
CP-64 BOARD
(See page 4-17)
KS-15 BOARD
(See page 4-73)
JS-25 BOARD
(See page 4-39)

8. DETAILED BLOCK DIAGRAM




DV-19 BOARD
(EFFECTS CONTROL)
(See page 4-87~109)
MM-27 BOARD (A-LINE MEMORY BLOCK)
(See page 4-31,35)
MM-27 BOARD
(B-LINE MEMORY BLOCK)
(See page 4-31,35)
RE-25 BOARD (2/3)
(See page 4-7)
AS-46 BOARD
(See page 4-72)
RE-25 BOARD (3/3)
(AUDIO OUTPUT)
(See page 4-7)
IC005 SYNC DET.
IC002 A/D CONV.
IC004 Y/C SEPARATION
IC003 Y/C SEPARATION
IC001 A/D CONV.
IC101 A/D CONV.
IC121 A/D CONV.
IC181 DIGITAL CHROMA DECORDER
DIGITAL NOISE REDUCTION
IC201 IC202 IC211 IC212 IC221 IC222 RAM (FRAME MEMORY)
IC351 DIGITAL CHROMA ENCODER
SPECIAL EFFECTS GEN.
IC401 D/A CONV.
IC421 D/A CONV.
IC131 WRITE TIMING GEN.
IC301 MEMORY CONTROLLER
IC302 ~ IC305 MUTE PULSE GEN.
IC331 IC932 SCROLL GATE ARRAY
IC451 READ TIMING GEN.
IC616 COMP. SYNC SW
IC623 IC622 IC625 IC624 75Ω DRIVER
IC610 C & BURST MIXER
IC609 IC607 IC608
IC621 IC615 IC620 IC619
IC404 IC405 IC406 IC407 SW
IC402 SELECT GATE
IC703 RESET
IC202 IC205 IC206 CHARACTOR GENERATOR
IC201 CLAMP
IC204 NTSC/PAL ENCORDER
IC202 IC203
IC006 SYNC DET.
SYNC GENERATOR
CHROMA / HUE PHASE SHIFTER
IC501 IC508 IC514
IC523 ADV SYNC GENERATOR
IC529 WIPE PROCESSOR
IC704 ~ IC706 EVR DECORDER D/A
IC531 WIPE PATTERN GENERATOR
SETTING TUNNING EFFCT DATA ROM
IC709 IC710
IC730 MAIN MICRCOMPUTER
IC711 I/O EXPANDER
IC104 NTSC/PAL ENCORDER
IC107 SW
IC403 VCA
IC101 GATE
IC516 MEMORY CONTROL MICOM
IC522 D-LATCH
IC954 IC950 LUMI KEY/ CHROMA KEY GATE AILEY
IC103 IC106 IC102 IC105
IC109 VCA
IC108 AGC AMP
IC952 DAC
TRANSIENT KEY SELECTOR
SOFT BORDER KEY GENERATOR
IC602 ~ IC607 IC614 IC615 IC307
IC301 ~ IC305 IC612 IC629 IC308
IC515 MIX AMP
IC520 IC620
IC519 BUFFER
IC051 IC061 AMP
IC001 INV. DCAMP
LEVEL METER
AUX 2/MIC
MONITOR
PGM 1
PGM 2
VIDEO
S-VIDEO
MONITOR
BB OUT
GPI OUT
CUE IN
CUE OUT 2
CUE OUT 1
RESET
MASTER CS
SCK
DATA TO MASTER
DATA FROM MASTER
RVD
R E/O
CG SCK
CG CS
CG DATA
READY
DATA BUS
ADDRESS BUS
AUDIO SELECT
EV AUDIO B
EV AUDIO A
M-OUT SEL 2
M-OUT SEL 1
M-OUT SEL 0
AU SEI B1
AU SEI B0
AU SEI A1
AU SEI A0


RE-25 BOARD (2/3)
(See page 4-7)
RS-62 BOARD
(See page 4-53)
ED-41 BOARD
(See page 4-56)
KS-15 BOARD (EFFECTS SWITCH)
(See page 4-73)
JS-25 BOARD (JOY STICK VOLUME)
(See page 4-39)
KY-22 BOARD (EDITOR SWITCH)
(See page 4-39)
DP-46 BOARD (TIME CODE CONTROL)
(See page 4-13)
CP-64 BOARD (SWITCH/LED CONTROL)
(See page 4-17)
FU-123 BOARD
(See page 4-114)
TRANSIENT KEY SELECTOR
SOFT BORDER KEY GENERATOR
IC602 ~ IC607 IC614 IC615 IC307
IC301 ~ IC305 IC612 IC629 IC308
IC500 MASTER MICOM
IC501 OSD MICOM
IC518 CPG, PTC, PIU, ICU
IC509 MEMORY EXPANDER
IC600 UART
IC602 UART
IC601
IC204 DRIVER
IC206 RECEIVER
IC202 IC203 RS-232C/422 SELECT SW
IC207 IC208 DRIV./RECEIV.
IC209 DRIVER/RECEIVER
IC610 IC609 IC607 IC608
IC621 IC615 IC620 IC619
IC623 IC622 IC625 IC624
IC202 IC203 IC204 IC201 IC205 IC206
IC403 VCA
IC107 SW
IC954 IC103 IC106 IC109 IC102 IC105 IC108 IC952
IC505 DATA SELECT
IC506 EE ROM
IC510 ROM
IC520 IC519 IC513 IC512 IC521 IC522 IC523 IC524 IC504 IC507
IC103 KEY/LED CONTROL
IC106 IC107 ADDRESS DECODER
IC102 KEY/LED CONTROL
IC104 IC105 ADDRESS DECODER
IC100 SELECT SWITCH
IC113 IC114 IC115 IC101
IC901 KEY/LED CONTROL
IC903 IC904 IC905 DRIVER
IC902 KEY/LED CONTROL
IC917 IC916 IC906 DRIVER
IC104 ADDRESS DECODER
IC101 J/S ENCODER
IC701 IC801
POWER UNIT
AC IN
FAN
FADER
SHUTTLE
JOG

FXE-100P

SONY

SERVICE MANUAL

AEP Model
UK Model
E Model

SUPPLEMENT-1

File this supplement with the Service Manual.

Subject : Change of Printed Wiring Boards

- The following two printing wiring boards are changed.

Before Change	After Change
AM-32 BOARD (A-7063-835-A)	AM-36 BOARD (A-7066-652-A)
AS-46 BOARD (A-7063-833-A)	AS-46P BOARD (A-7066-664-A)

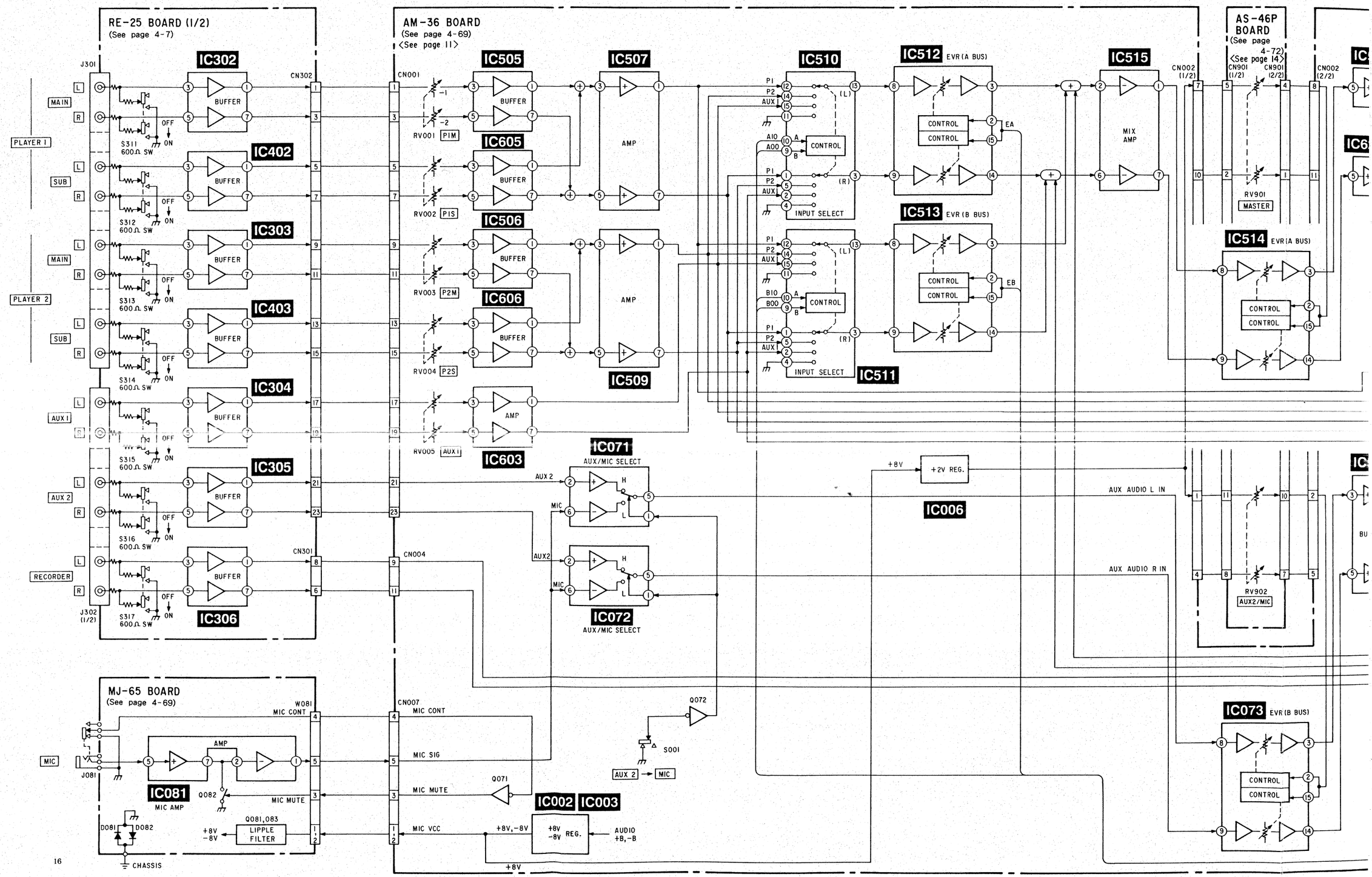
- Because these two boards are changed, the Block Diagram, Printed Wiring Board, Schematic Diagram and Electrical Parts List are also changed and added herewith.

Note :
"See page" indicates the page of the block diagrams and schematic diagrams to be referred to.

(See page) : If "See page" is in the round parenthesis ( ), refer to the Service Manual.

〈See page〉 : If "See page" is in the triangular parenthesis 〈 〉, refer to the Service Manual SUPPLEMENT-1.

AUDIO BLOCK DIAGRAM



BOARD
4-69)
11>

IC505
BUFFER
IC605
BUFFER
IC506
BUFFER
IC606
BUFFER
AMP
IC507
AMP
IC509
AMP
IC603
P1M
P1S
P2M
P2S
AUX 1

IC510
P1
P2
AUX
A10
A00
B10
B00
CONTROL
(L)
(R)
INPUT SELECT
IC511

IC512 EVR (A BUS)
IC513 EVR (B BUS)
CONTROL
EA
EB

IC515
MIX AMP

CN002 (1/2)
CN002 (2/2)

AS-46P BOARD
(See page 4-72)
<See page 14>
CN901 (1/2)
CN901 (2/2)
RV901 MASTER

IC514 EVR (A BUS)

IC520 (2/2)
IC620 (2/2)
AMP

IC516
PGM/REC SELECT
IC616
PGM/REC SELECT
PGM
REC
H
L

M20

IC520 (1/2)
IC620 (1/2)
PGM OUT L
PGM OUT R

IC004
BUFFER
IC005
AMP
IC051 (2/2)
AMP
RV006 MONITOR
Q051
Q052
Q061
Q062
IC061 (2/2)
Q031
POWER INITIAL MUTE
MUTE
CN004

IC518 (MONITOR)
OUTPUT SELECT
CONTROL
A
B
M10
M00

IC051 (1/2)
AMP
CN006
LV L
LV R
L
R
IC061 (1/2)

RE-25 B
(See page 4
CN301
S301
PGM 1
ON
OFF
MONITOR
MUTE

+8V
+2V REG.
IC006

AUX AUDIO L IN
AUX AUDIO R IN
RV902 AUX2/MIC

IC519
BUFFER

IC071
AUX/MIC SELECT
AUX 2
MIC
IC072
AUX/MIC SELECT
AUX2
MIC

Q072
S001
AUX 2 → MIC
Q071

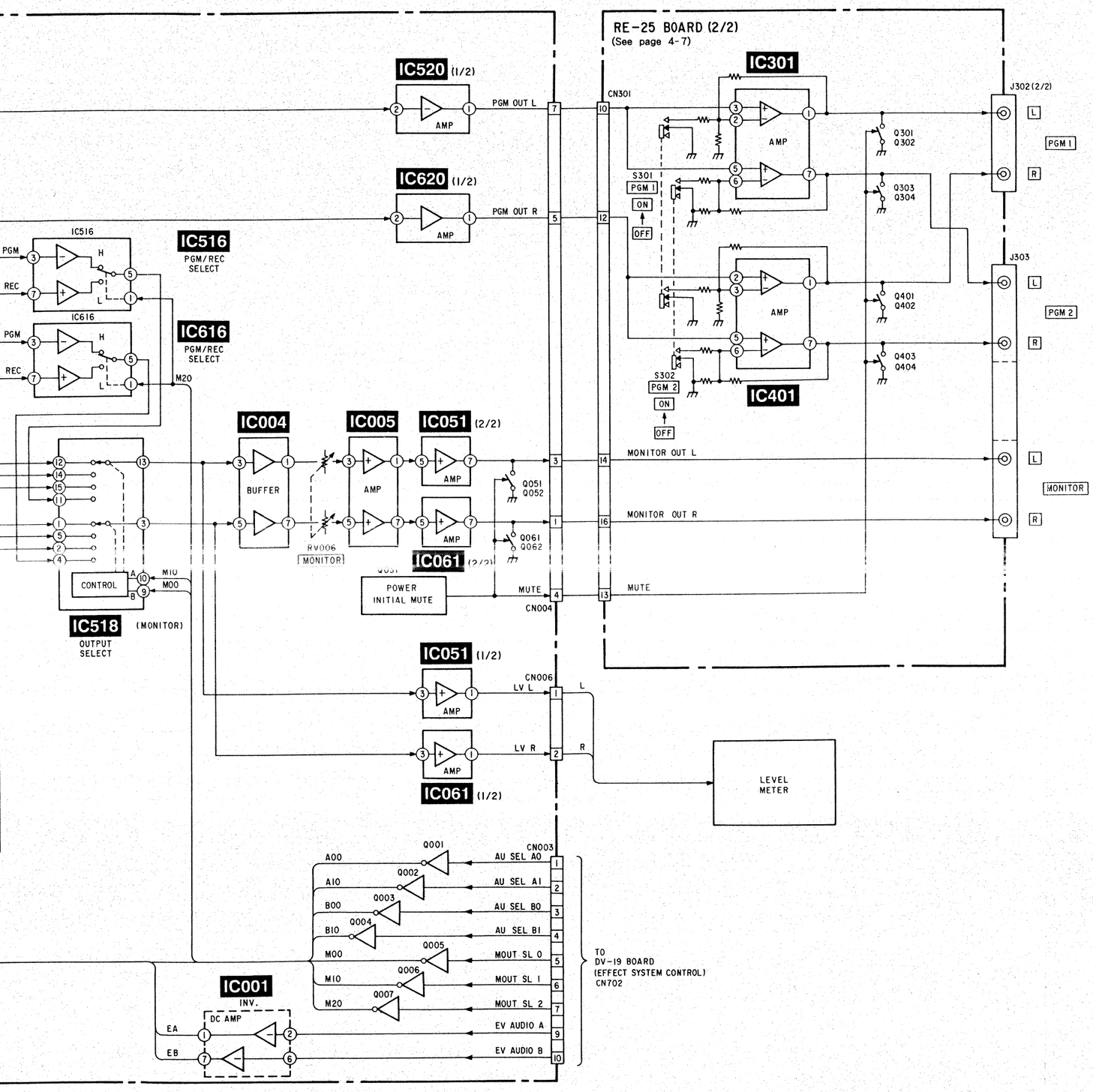
IC073 EVR (B BUS)
CONTROL

IC001
INV.
DC AMP
EA
EB

Q001
Q002
Q003
Q004
Q005
Q006
Q007
A00
A10
B00
B10
M00
M10
M20
CN003
AU SEL A0
AU SEL A1
AU SEL B0
AU SEL B1
MOUT SL 0
MOUT SL 1
MOUT SL 2
EV AUDIO A
EV AUDIO B
TO DV-19 BOARD (EFFECT SYSTEM CC CN702

IC002 IC003
+8V, -8V
+8V -8V REG.
AUDIO +B, -B
+8V

IC512 EVR (A BUS)
IC513 EVR (B BUS)
IC511
IC515
MIX AMP
CONTROL
EA
EB
(L)
(R)
INPUT SELECT
CN002 (1/2)
CN002 (2/2)
AS-46P BOARD
(See page 4-72)
<See page 14>
CN901 (1/2)
CN901 (2/2)
RV901
MASTER
IC514 EVR (A BUS)
IC520 (2/2)
IC620 (2/2)
AMP
IC516
PGM
REC
H
L
IC516 PGM/REC SELECT
IC616
IC616 PGM/REC SELECT
M20
IC520 (1/2)
IC620 (1/2)
PGM OUT L
PGM OUT R
RE-25 BOARD (2/2)
(See page 4-7)
IC301
CN301
J302 (2/2)
J303
L
R
PGM 1
PGM 2
S301
PGM 1
ON
OFF
S302
PGM 2
IC401
Q301 Q302
Q303 Q304
Q401 Q402
Q403 Q404
MONITOR OUT L
MONITOR OUT R
MONITOR
IC004
BUFFER
IC005
AMP
IC051 (2/2)
Q051 Q052
Q061 Q062
RV006
MONITOR
IC061 (2/2)
Q031
POWER INITIAL MUTE
MUTE
CN004
IC518 OUTPUT SELECT
(MONITOR)
M10
M00
CONTROL
A
B
+8V
+2V REG.
IC006
AUX AUDIO L IN
AUX AUDIO R IN
RV902
AUX2/MIC
IC519
BUFFER
IC051 (1/2)
CN006
LV L
LV R
L
R
IC061 (1/2)
LEVEL METER
IC073 EVR (B BUS)
IC001
INV.
DC AMP
EA
EB
Q001
Q002
Q003
Q004
Q005
Q006
Q007
A00
A10
B00
B10
M00
M10
M20
CN003
AU SEL A0
AU SEL A1
AU SEL B0
AU SEL B1
MOUT SL 0
MOUT SL 1
MOUT SL 2
EV AUDIO A
EV AUDIO B
TO DV-19 BOARD (EFFECT SYSTEM CONTROL) CN702

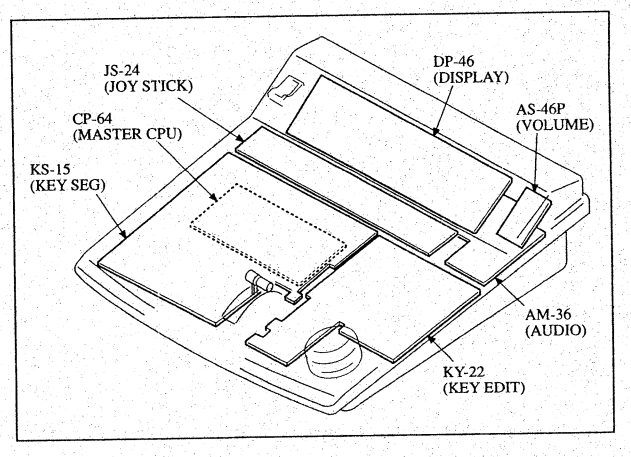


Note :
"See page" indicates the page of the block diagrams and schematic diagrams to be referred to.

(See page) : If "See page" is in the round parenthesis ( ), refer to the Service Manual.

〈See page〉 : If "See page" is in the triangular parenthesis 〈 〉, refer to the Service Manual SUPPLEMENT-1.

FXE-100P



AM-36 BOARD

C001	I–22	C031	H–10	C078	I–4	C552	E–2	C582	I–22	C662	F–11	D502	E–24	IC073	I–6
C002	I–22	C032	H–10	C079	J–5	C553	G–7	C605	F–11	C663	G–18	D503	F–24	IC505	C–7
C003	H–2	C051	J–4	C090	J–18	C554	G–5	C606	F–11	C665	H–18	D504	H–24	IC506	C–9
C004	I–3	C061	J–5	C091	J–18	C555	G–5	C621	E–7	C666	H–7	D505	H–24	IC507	E–20
C005	I–2	C063	H–11	C507	F–22	C557	H–7	C622	E–10	C673	H–1	D601	G–24	IC509	E–19
C006	J–3	C064	G–11	C508	G–3	C558	H–6	C626	E–7	C674	G–22	D602	G–24	IC510	E–23
C011	I–17	C065	G–10	C523	E–4	C559	G–21	C627	E–9			D603	G–24	IC511	F–23
C013	I–18	C066	I–11	C524	F–5	C560	I–5	C635	E–11	CN001	K–7			IC512	G–6
C014	G–22	C067	I–6	C528	F–6	C562	F–11	C641	E–4	CN002	J–11	IC001	I–22	IC513	G–4
C015	G–22	C068	J–20	C529	E–6	C563	G–8	C642	E–5	CN003	K–2	IC002	G–2	IC514	G–8
C016	F–22	C069	J–6	C533	G–10	C564	H–16	C643	F–7	CN004	K–4	IC003	F–2	IC515	G–15
C017	I–16	C070	J–20	C534	G–11	C565	H–17	C647	G–10	CN005	J–9	IC004	G–3	IC516	E–18
C018	I–9	C071	H–10	C535	E–11	C566	H–18	C653	G–5	CN006	J–2	IC005	A–11	IC518	G–23
C019	I–15	C072	H–10	C541	F–4	C571	H–1	C654	F–4	CN007	H–11	IC006	J–10	IC519	G–14
C020	I–10	C074	I–14	C542	F–5	C572	H–2	C656	F–21			IC051	I–3	IC520	F–15
C021	J–17	C075	I–4	C543	F–7	C573	H–3	C657	H–5	D031	H–16	IC061	I–4	IC603	C–11
C023	J–17	C076	I–11	C547	F–10	C574	G–1	C658	H–3	D032	H–16	IC071	I–14	IC605	A–7
C025	G–3	C077	J–14	C551	F–1	C581	J–3	C660	H–5	D501	F–24	IC072	J–14	IC606	A–9

AM-36 (AUDIO) / AS-46P (VOLUME) PRINTED WIRING BOARDS

— Ref. No. : AM-36 Board; 1,000 / AS-46P Board; 1,000 Series —

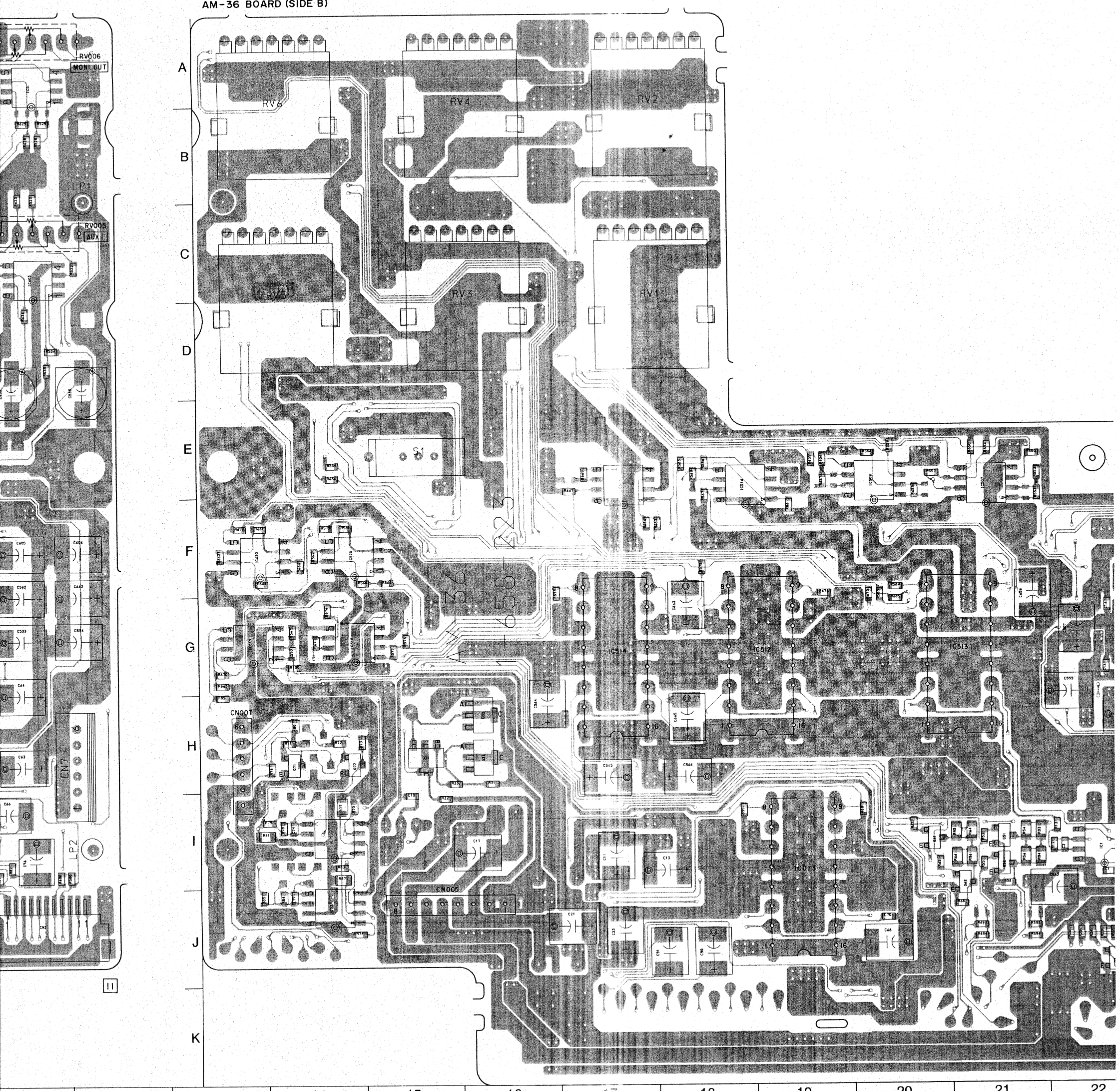
AM–36 BOARD (SIDE A)

SUB

MAIN

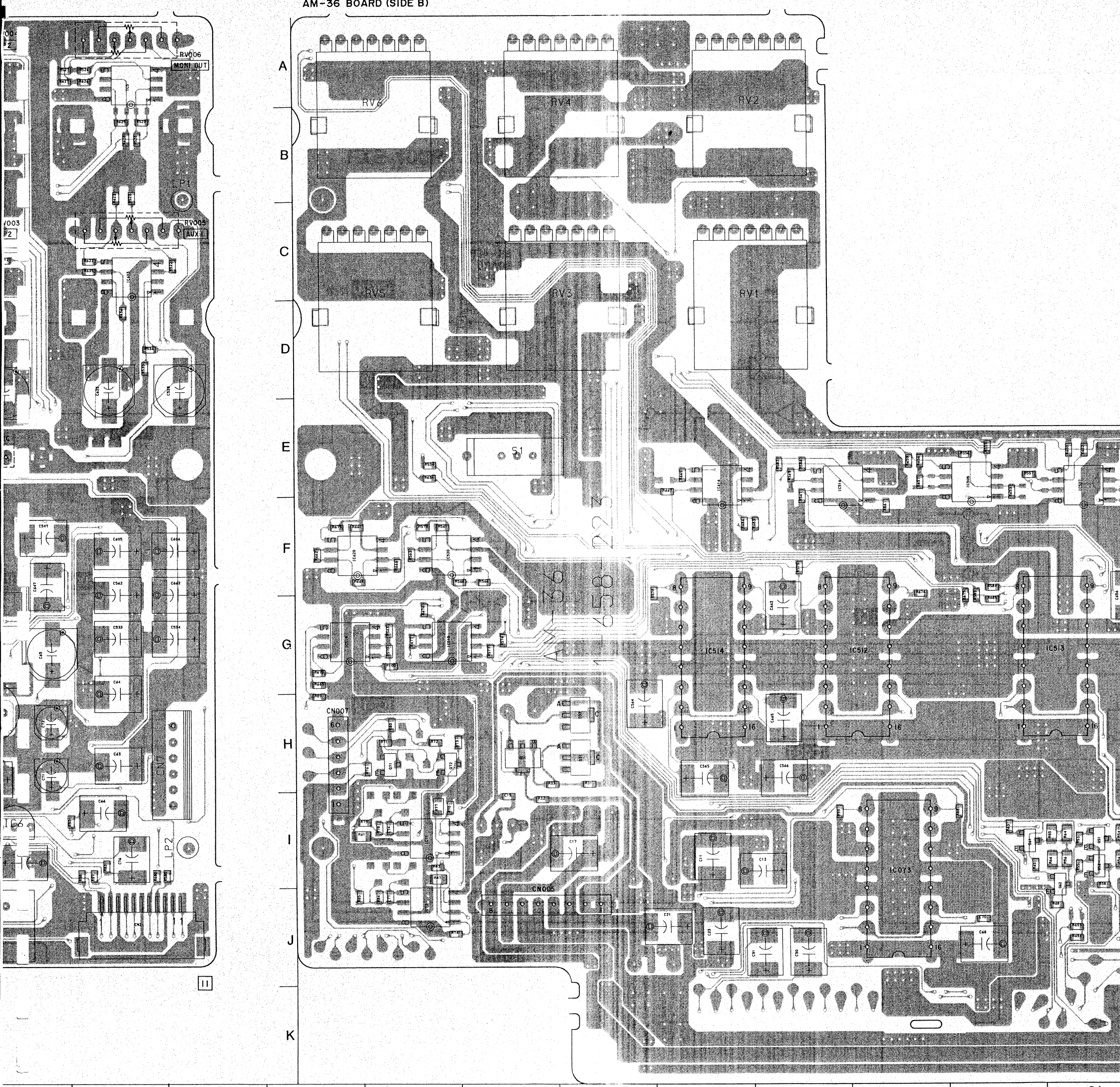
I–6	IC616	E–17	Q072	H–15	R032	I–15	R071	H–14	R089	H–13	R522	C–11	R555	D–9	R576	G–15	R613	B–9	R652	E–21	R673	E–23	
C–7	IC620	F–14			R033	H–16	R072	H–14	R090	I–10	R523	B–11	R556	E–20	R577	G–15	R616	A–8	R653	E–20	R674	F–19	
C–9	L001	I–8	R001	I–3	R052	I–4	R073	H–15	R093	I–21	R525	G–3	R557	E–21	R578	F–17	R617	A–8	R654	B–7	R675	F–20	
E–20	L002	J–8	R002	I–22	R053	I–21	R074	J–15	R094	I–21	R526	A–10	R558	D–9	R579	F–14	R622	C–10	R655	B–9	R676	G–14	
E–19	L003	H–9	R003	I–22	R054	I–21	R075	I–4	R095	I–20	R527	A–10	R559	E–20	R580	I–11	R623	B–11	R656	E–19	R677	G–14	
E–23	Q001	K–2	R004	I–3	R055	I–21	R076	H–14	R096	I–21	R528	B–11	R561	F–15	R581	F–6	R625	G–3	R657	E–19	R678	G–7	
F–23	Q002	K–2	R005	I–3	R056	I–21	R077	I–14	R097	I–11	R529	B–11	R562	F–14	R583	E–18	R626	A–10	R658	B–9	R679	F–14	
G–6	Q003	J–22	R011	I–3	R057	I–3	R078	I–14	R098	I–11	R531	F–3	R563	G–14	R584	F–20	R627	A–10	R659	E–19	R680	I–11	
G–4	Q004	J–3	R012	I–21	R058	I–21	R079	I–13	R099	I–18	R532	F–4	R564	F–15	R585	F–20	R628	B–11	R661	F–14	R681	E–8	
G–8	Q005	J–3	R013	H–21	R061	I–14	R080	H–14	R100	G–14	R533	F–3	R566	F–15	R586	E–18	R629	B–11	R662	F–14	R683	F–18	
G–15	Q006	J–3	R021	J–22	R062	I–4	R081	I–4	R502	C–8	R534	E–15	R567	E–18	R593	J–21	R631	F–4	R663	G–13	R684	G–4	
E–18	Q007	K–3	R022	J–22	R063	I–20	R082	I–11	R503	C–7	R535	D–11	R569	E–18	R594	J–21	R632	F–3	R664	F–14	R685	F–20	
G–23	Q031	H–15	R023	J–22	R064	I–21	R083	I–14	R506	C–7	R536	D–11	R570	G–14	R595	K–4	R633	E–7	R666	F–14	R686	F–18	
G–14	Q051	I–21	R024	J–22	R065	I–20	R084	J–14	R507	B–7	R550	E–2	R571	H–1	R602	B–7	R634	E–15	R667	E–17	R693	J–21	
F–15	Q052	I–21	R025	J–22	R066	I–20	R085	J–14	R512	C–9	R551	D–7	R572	H–1	R603	C–7	R635	C–10	R669	E–17	R694	J–21	
C–11	Q06	I–20	R026	J–22	R067	I–4	R086	E–19	R513	C–8	R552	E–2	R573	H–2	R606	A–7	R636	D–11	R670	G–13	R695	J–5	
A–7	Q062	I–21	R027	I–2	R068	I–20	R087	I–14	R516	B–9	R553	E–2	R574	G–6	R607	A–7	R650	E–21	R671	E–23			
A–9	Q071	H–14	R031	H–16	R070	I–14	R088	I–20	R517	B–9	R554	D–7	R575	F–18	R612	B–9	R651	B–8	R672	E–23	RV001	C–18	

AM-36 BOARD (SIDE B)

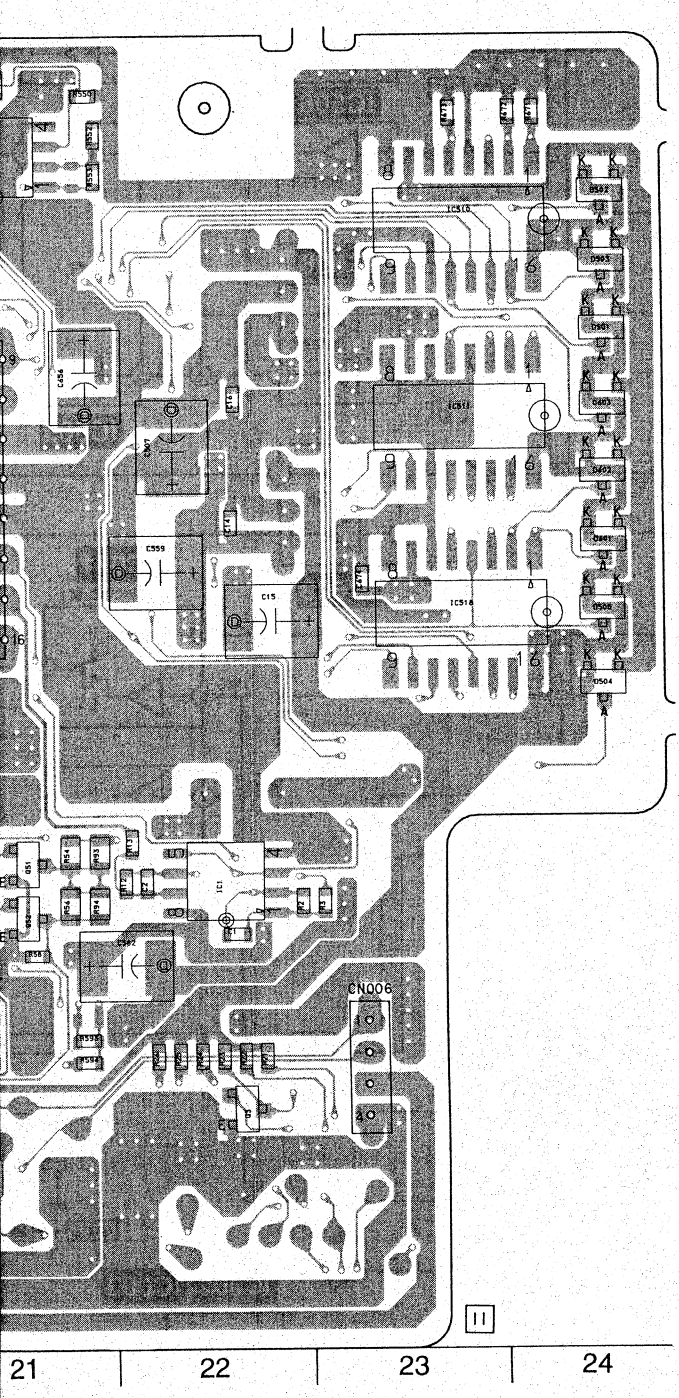


E–24	IC073	I–6	IC616	E–17	Q072	H–15	R032	I–15	R071	H–14	R089	H–13	R522	C–11	R555	D–9	R576	G–15	R613	B–9	R652	E–21
F–24	IC505	C–7	IC620	F–14			R033	H–16	R072	H–14	R090	I–10	R523	B–11	R556	E–20	R577	G–15	R616	A–8	R653	E–20
H–24	IC506	C–9	L001	I–8	R001	I–3	R052	I–4	R073	H–15	R093	I–21	R525	G–3	R557	E–21	R578	F–17	R617	A–8	R654	B–7
H–24	IC507	E–20	L002	J–8	R002	I–22	R053	I–21	R074	J–15	R094	I–21	R526	A–10	R558	D–9	R579	F–14	R622	C–10	R655	B–9
G–24	IC509	E–19	L003	H–9	R003	I–22	R054	I–21	R075	I–4	R095	I–20	R527	A–10	R559	E–20	R580	I–11	R623	B–11	R656	E–19
G–24	IC510	E–23	Q001	K–2	R004	I–3	R055	I–21	R076	H–14	R096	I–21	R528	B–11	R561	F–15	R581	F–6	R625	G–3	R657	E–19
G–24	IC511	F–23	Q002	K–2	R005	I–3	R056	I–21	R077	I–14	R097	I–11	R529	B–11	R562	F–14	R583	E–18	R626	A–10	R658	B–9
	IC512	G–6	Q003	J–22	R011	I–3	R057	I–3	R078	I–14	R098	I–11	R531	F–3	R563	G–14	R584	F–20	R627	A–10	R659	E–19
I–22	IC513	G–4	Q004	J–3	R012	I–21	R058	I–21	R079	I–13	R099	I–18	R532	F–4	R564	F–15	R585	F–20	R628	B–11	R661	F–14
G–2	IC514	G–8	Q005	J–3	R013	H–21	R061	I–14	R080	H–14	R100	G–14	R533	F–6	R566	F–15	R586	E–18	R629	B–11	R662	F–14
F–2	IC515	G–15	Q006	J–3	R021	J–22	R062	I–4	R081	I–4	R502	C–3	R534	E–15	R567	E–18	R593	J–21	R631	F–4	R663	G–13
G–3	IC516	E–18	Q007	K–3	R022	J–22	R063	I–20	R082	I–11	R503	C–7	R535	D–11	R569	E–18	R594	J–21	R632	F–3	R664	F–14
A–11	IC518	G–23	Q031	H–15	R023	J–22	R064	I–21	R083	I–14	R506	C–7	R536	D–11	R570	G–14	R595	K–4	R633	E–7	R666	F–14
J–10	IC519	G–14	Q051	I–21	R024	J–22	R065	I–20	R084	J–14	R507	B–7	R550	E–21	R571	H–1	R602	B–7	R634	E–15	R667	E–17
I–3	IC520	F–15	Q052	I–21	R025	J–22	R066	I–20	R085	J–14	R512	C–3	R551	D–7	R572	H–1	R603	C–7	R635	C–10	R669	E–17
I–4	IC603	C–11	Q06	I–20	R026	J–22	R067	I–4	R086	E–19	R513	C–3	R552	E–21	R573	H–2	R606	A–7	R636	D–11	R670	G–13
I–14	IC605	A–7	Q062	I–21	R027	I–2	R068	I–20	R087	I–14	R516	B–3	R553	E–21	R574	G–6	R607	A–7	R650	E–21	R671	E–23
J–14	IC606	A–9	Q071	H–14	R031	H–16	R070	I–14	R088	I–20	R517	B–3	R554	D–7	R575	F–18	R612	B–9	R651	B–8	R672	E–23

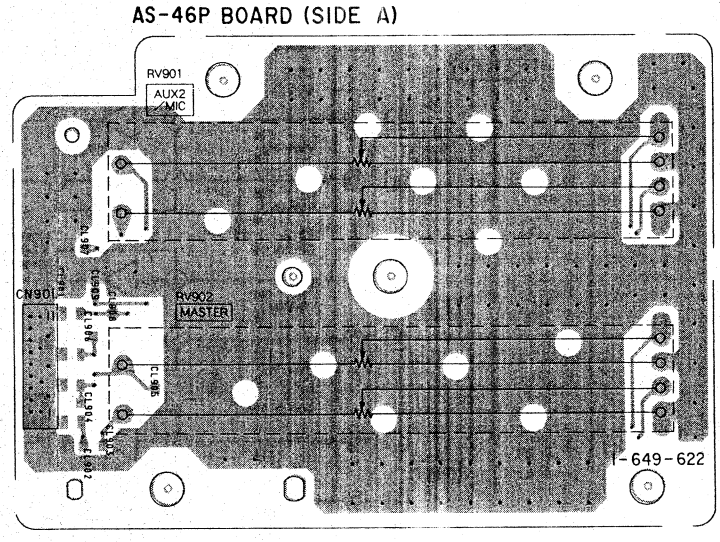
AM-36 BOARD (SIDE B)



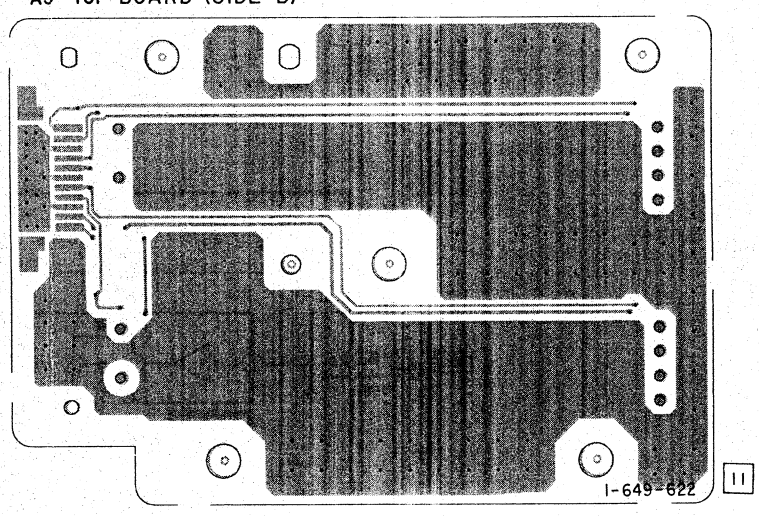
–21	R673	E–23	RV002	A–18
–20	R674	F–19	RV003	C–16
–7	R675	F–20	RV004	A–16
–9	R676	G–14	RV005	C–14
–19	R677	G–14	RV006	A–14
–19	R678	G–7		
–9	R679	F–14	S001	E–15
–19	R680	I–11		
–14	R681	E–8		
–14	R683	F–18		
–13	R684	G–4		
–14	R685	F–20		
–14	R686	F–18		
–17	R693	J–21		
–17	R694	J–21		
–13	R695	J–5		
–23				
–23	RV001	C–18		



AS-46P BOARD (SIDE A)

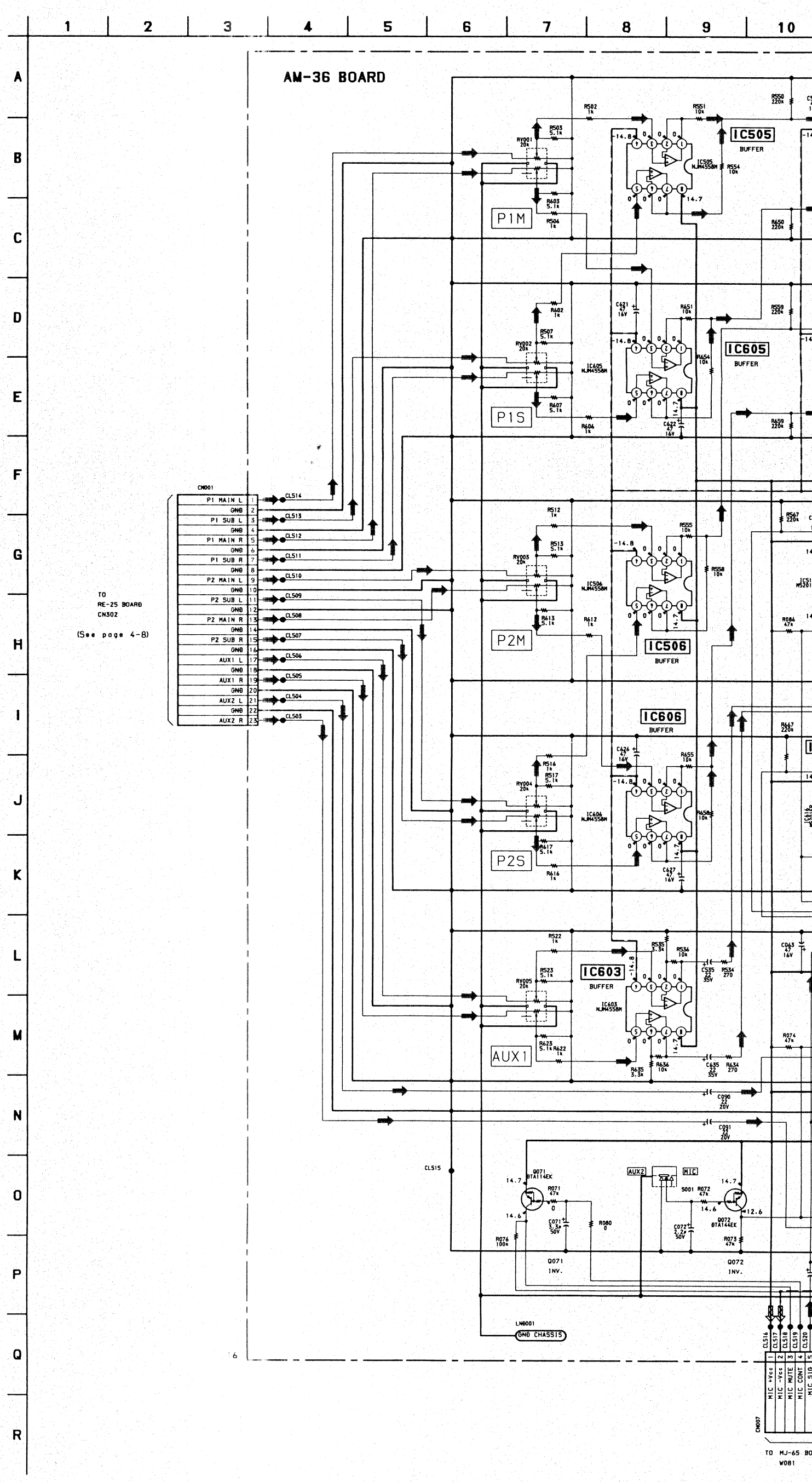


AS-46P BOARD (SIDE B)



AM-36 (AUDIO) / AS-46P (VOLUME) SCHEMATIC DIAGRAM

— Ref. No. : AM-36 Board; 1,000 / AS-46P Board; 1,000 Series —



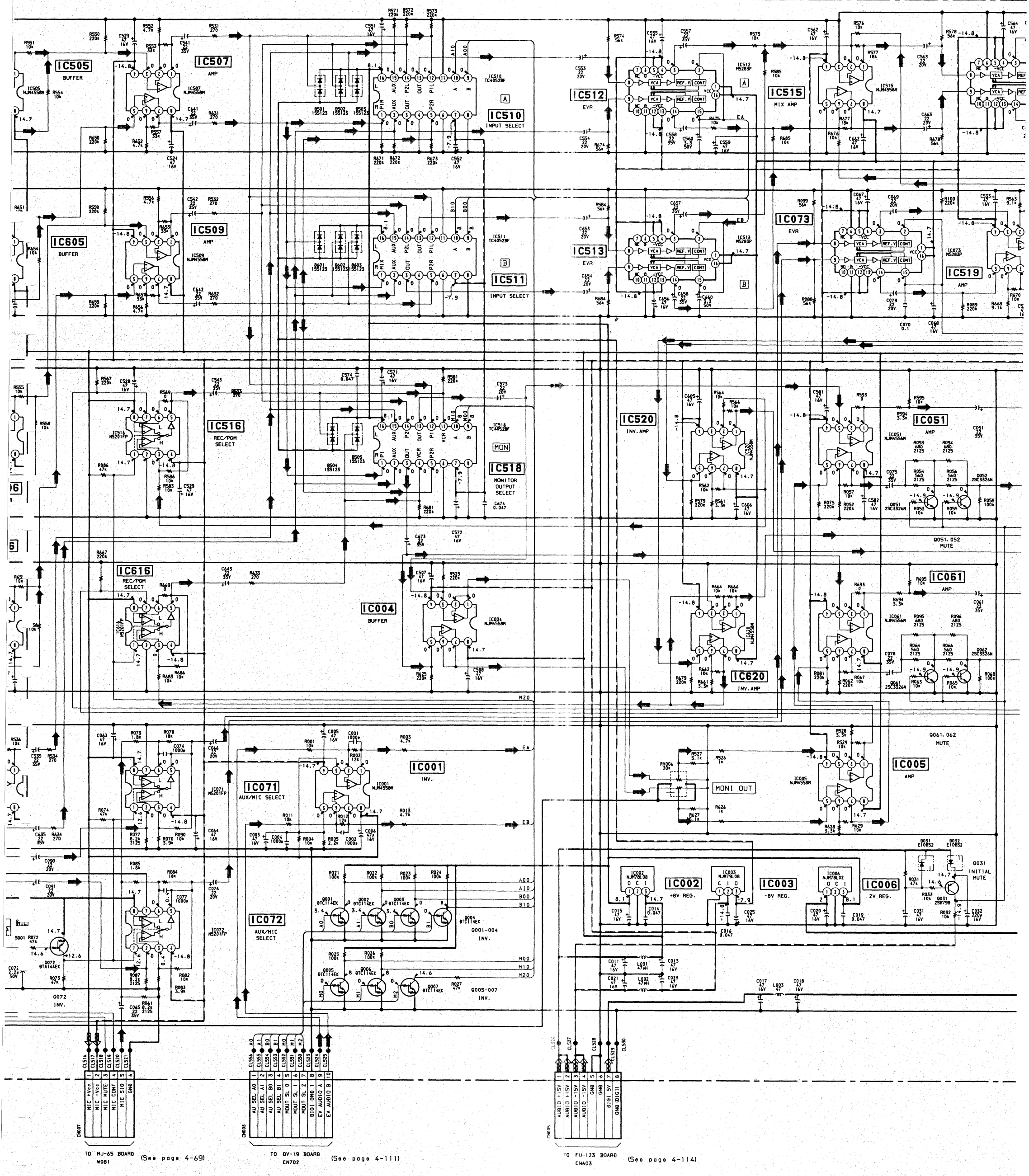
Note :
"See page" indicates the page of the block diagrams and schematic diagrams to be referred to.

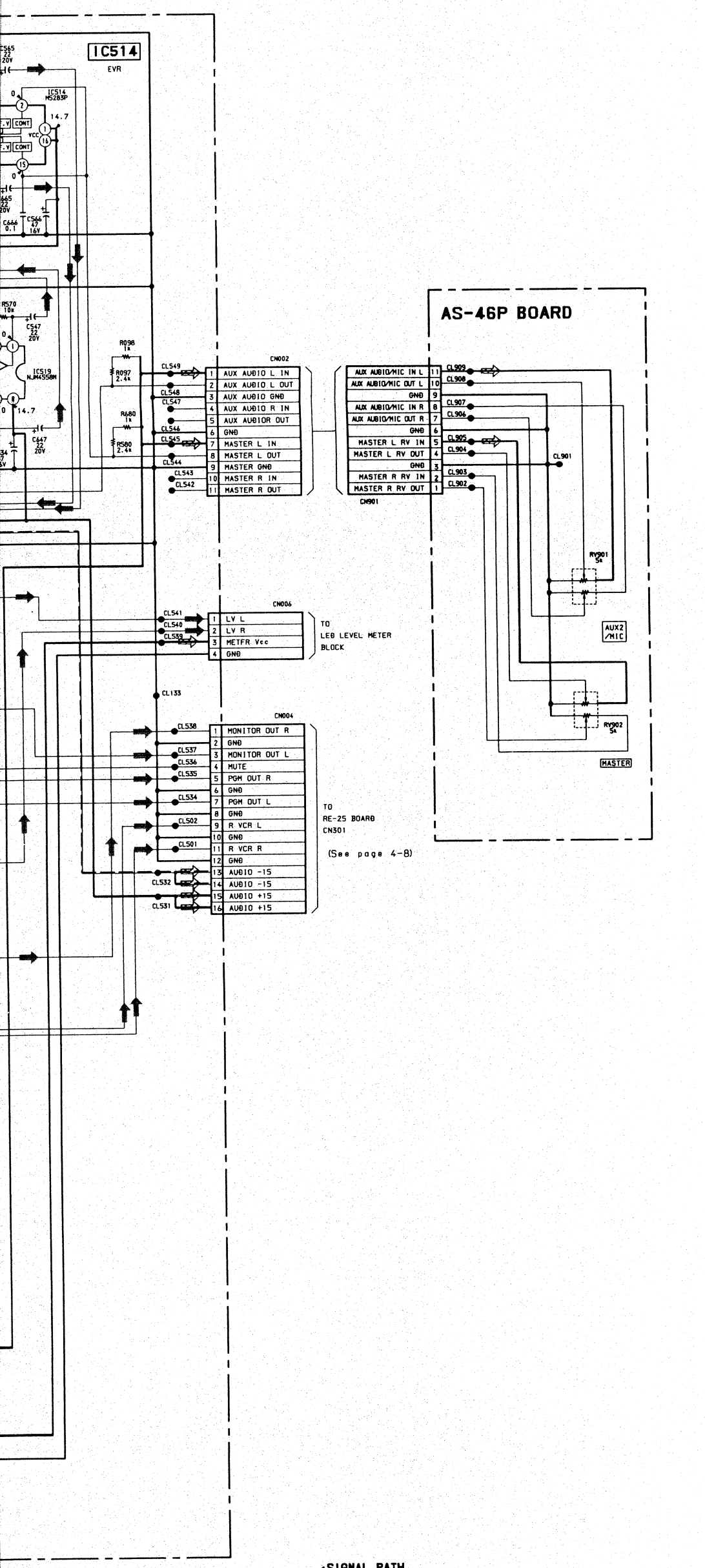
(See page) : If "See page" is in the round parenthesis ( ), refer to the Service Manual.

〈See page〉 : If "See page" is in the triangular parenthesis 〈 〉, refer to the Service Manual SUPPLEMENT-1.

IC507 AMP
IC509 AMP
IC510 INPUT SELECT
IC511 INPUT SELECT
IC512 EVR
IC513 EVR
IC515 MIX AMP
IC073 EVR
IC519 AMP
IC516 REC/PGM SELECT
IC518 MONITOR OUTPUT SELECT
IC520 INV. AMP
IC051 AMP
IC616 REC/PGM SELECT
IC004 BUFFER
IC620 INV. AMP
IC061 AMP
IC071 AUX/MIC SELECT
IC001 INV.
IC005 AMP
IC072 AUX/MIC SELECT
Q001-004 INV.
Q005-007 INV.
IC002 +8V REG.
IC003 -8V REG.
IC006 2V REG.
Q051, 052 MUTE
Q061, 062 MUTE
Q031 INITIAL MUTE
MON
MONI OUT

TO DV-19 BOARD CN702 (See page 4-111)
TO FU-123 BOARD CN603 (See page 4-114)
(See page 4-69)


9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
IC505
BUFFER
IC507
AMP
IC510
INPUT SELECT
IC512
EVR
IC515
MIX AMP
IC605
BUFFER
IC509
AMP
IC511
INPUT SELECT
IC513
EVR
IC073
EVR
IC519
AMP
IC516
REC/PGM SELECT
IC518
MONITOR OUTPUT SELECT
MON
IC520
INV. AMP
IC051
AMP
Q051. 052
MUTE
IC616
REC/PGM SELECT
IC004
BUFFER
IC620
INV. AMP
IC061
AMP
Q061. 062
MUTE
IC001
INV.
IC071
AUX/MIC SELECT
MONI OUT
IC005
AMP
IC072
AUX/MIC SELECT
Q001-004
INV.
Q072
INV.
Q005-007
INV.
IC002
+8V REG.
IC003
-8V REG.
IC006
2V REG.
Q031
INITIAL MUTE
CN007
MIC +Vcc
MIC -Vcc
MIC MUTE
MIC CONT
MIC SIG
GND
CN003
AU SEL A0
AU SEL A1
AU SEL B0
AU SEL B1
MOUT SL 0
MOUT SL 1
MOUT SL 2
DIGI GND
EV AUDIO A
EV AUDIO B
CN005
AUDIO +15V
AUDIO +15V
AUDIO -15V
AUDIO -15V
GND
GND
DIGI 5V
GND (DIGI)
TO MJ-65 BOARD
W081
(See page 4-69)
TO DV-19 BOARD
CN702
(See page 4-111)
TO FU-123 BOARD
CN603
(See page 4-114)



·SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
				➡

AM-36

ELECTRICAL PARTS LIST

NOTE:

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...

Ref. No.	Part No.	Description			Remarks
*	A-7066-652-A	AM-36 BOARD, COMPLETE			
		**********			
		(Ref.No.1,000 Series)			
	2-118-268-01	NUT (M9), HEXAGON			
		< CAPACITOR >			
C001	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C002	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C003	1-126-204-11	ELECT CHIP	47uF	20%	16V
C004	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C005	1-126-204-11	ELECT CHIP	47uF	20%	16V
C006	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C011	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C013	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C014	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C015	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C016	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C017	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C018	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C019	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C020	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C021	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C023	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C025	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C031	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C032	1-124-120-11	ELECT	220uF	20%	25V
C051	1-126-400-11	ELECT	22uF	20%	35V
C061	1-126-400-11	ELECT	22uF	20%	35V
C063	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C064	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C065	1-126-400-11	ELECT	22uF	20%	35V
C066	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C067	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C068	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C069	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C070	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C071	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C072	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C074	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C075	1-126-400-11	ELECT	22uF	20%	35V
C076	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C077	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C078	1-126-400-11	ELECT	22uF	20%	35V
C079	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C090	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C091	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C507	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C508	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C523	1-126-204-11	ELECT CHIP	47uF	20%	16V
C524	1-126-204-11	ELECT CHIP	47uF	20%	16V
C528	1-126-204-11	ELECT CHIP	47uF	20%	16V
C529	1-126-204-11	ELECT CHIP	47uF	20%	16V
C530	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C534	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C535	1-126-400-11	ELECT	22uF	20%	35V
C541	1-126-400-11	ELECT	22uF	20%	35V
C542	1-126-400-11	ELECT	22uF	20%	35V
C543	1-126-400-11	ELECT	22uF	20%	35V
C547	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C551	1-126-204-11	ELECT CHIP	47uF	20%	16V
C552	1-126-204-11	ELECT CHIP	47uF	20%	16V
C553	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C554	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C555	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C557	1-126-400-11	ELECT	22uF	20%	35V
C558	1-126-400-11	ELECT	22uF	20%	35V
C559	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C560	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C562	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C563	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C564	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C565	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C566	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C571	1-126-204-11	ELECT CHIP	47uF	20%	16V
C572	1-126-204-11	ELECT CHIP	47uF	20%	16V
C573	1-135-164-21	TANTAL. CHIP	22uF	20%	20V

AM-36

Ref. No.	Part No.	Description			Remarks
C574	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C581	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C582	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C605	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C606	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C621	1-126-204-11	ELECT CHIP	47uF	20%	16V
C622	1-126-204-11	ELECT CHIP	47uF	20%	16V
C626	1-126-204-11	ELECT CHIP	47uF	20%	16V
C627	1-126-204-11	ELECT CHIP	47uF	20%	16V
C635	1-126-400-11	ELECT	22uF	20%	35V
C641	1-126-400-11	ELECT	22uF	20%	35V
C642	1-126-400-11	ELECT	22uF	20%	35V
C643	1-126-400-11	ELECT	22uF	20%	35V
C647	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C653	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C654	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C656	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C657	1-126-400-11	ELECT	22uF	20%	35V
C658	1-126-400-11	ELECT	22uF	20%	35V
C660	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C662	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C663	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C665	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C666	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C673	1-126-400-11	ELECT	22uF	20%	35V
C674	1-164-361-11	CERAMIC CHIP	0.047uF		16V
		< CONNECTOR >			
CN001	1-568-207-11	CONNECTOR, FPC (ZIF) 23P			
CN002	1-566-543-31	CONNECTOR, FPC (NON ZIF) 11P			
CN003	1-566-542-31	CONNECTOR, FPC (NON ZIF) 10P			
CN004	1-566-532-11	CONNECTOR, FPC (ZIF) 16P			
CN005	1-506-487-11	PIN, CONNECTOR 8P			
CN006	1-506-483-21	PIN, CONNECTOR 4P			
CN007	1-506-471-11	PIN, CONNECTOR 6P			
		< DIODE >			
D031	8-719-200-27	DIODE E10DS2			
D032	8-719-200-27	DIODE E10DS2			
D501	8-719-800-76	DIODE 1SS226			
D502	8-719-800-76	DIODE 1SS226			
D503	8-719-800-76	DIODE 1SS226			
D504	8-719-800-76	DIODE 1SS226			
D505	8-719-800-76	DIODE 1SS226			
D601	8-719-800-76	DIODE 1SS226			
D602	8-719-800-76	DIODE 1SS226			
D603	8-719-800-76	DIODE 1SS226			
		< IC >			
IC001	8-759-100-96	IC uPC4558G2			
IC002	8-759-708-08	IC NJM78L08A			
IC003	8-759-700-67	IC NJM79L08A			
IC004	8-759-100-96	IC uPC4558G2			
IC005	8-759-100-96	IC uPC4558G2			
IC006	8-759-982-20	IC RC78L02A			
IC051	8-759-700-45	IC NJM4556M-A			
IC061	8-759-700-45	IC NJM4556M-A			
IC071	8-759-603-27	IC M5201FP			
IC072	8-759-603-27	IC M5201FP			
IC073	8-759-635-26	IC M5283P			
IC505	8-759-100-96	IC uPC4558G2			
IC506	8-759-100-96	IC uPC4558G2			
IC507	8-759-100-96	IC uPC4558G2			
IC509	8-759-100-96	IC uPC4558G2			
IC510	8-759-932-64	IC BU4052BF			
IC511	8-759-932-64	IC BU4052BF			
IC512	8-759-635-26	IC M5283P			
IC513	8-759-635-26	IC M5283P			
IC514	8-759-635-26	IC M5283P			
IC515	8-759-100-96	IC uPC4558G2			
IC516	8-759-603-27	IC M5201FP			
IC518	8-759-932-64	IC BU4052BF			
IC519	8-759-100-96	IC uPC4558G2			
IC520	8-759-100-96	IC uPC4558G2			
IC603	8-759-100-96	IC uPC4558G2			
IC605	8-759-100-96	IC uPC4558G2			
IC606	8-759-100-96	IC uPC4558G2			
IC616	8-759-603-27	IC M5201FP			
IC620	8-759-100-96	IC uPC4558G2			
		< COIL >			
L001	1-410-671-31	INDUCTOR 47uH			
L002	1-410-671-31	INDUCTOR 47uH			
L003	1-410-671-31	INDUCTOR 47uH			
		< TRANSISTOR >			
Q001	8-729-900-53	TRANSISTOR DTC114EK			
Q002	8-729-900-53	TRANSISTOR DTC114EK			
Q003	8-729-900-53	TRANSISTOR DTC114EK			
Q004	8-729-900-53	TRANSISTOR DTC114EK			
Q005	8-729-900-53	TRANSISTOR DTC114EK			
Q006	8-729-900-53	TRANSISTOR DTC114EK			
Q007	8-729-900-53	TRANSISTOR DTC114EK			
Q031	8-729-101-07	TRANSISTOR 2SB798-DL			
Q051	8-729-202-38	TRANSISTOR 2SC3326N-A			
Q052	8-729-202-38	TRANSISTOR 2SC3326N-A			
Q061	8-729-202-38	TRANSISTOR 2SC3326N-A			
Q062	8-729-202-38	TRANSISTOR 2SC3326N-A			
Q071	8-729-901-04	TRANSISTOR DTA114EK			
Q072	8-729-901-06	TRANSISTOR DTA144EK			

AM

Ref. No.

R001
R002
R003
R004
R005
R011
R012
R013
R021
R022
R023
R024
R025
R026
R027
R031
R032
R033
R052
R053
R054
R055
R056
R057
R058
R061
R062
R063
R064
R065
R066
R067
R068
R070
R071
R072
R073
R074
R075
R076
R077
R078
R079
R080
R081
R082
R083
R084
R085
R086

Ref. No.	Part No.	Description			Remarks
C574	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C581	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C582	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C605	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C606	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C621	1-126-204-11	ELECT CHIP	47uF	20%	16V
C622	1-126-204-11	ELECT CHIP	47uF	20%	16V
C626	1-126-204-11	ELECT CHIP	47uF	20%	16V
C627	1-126-204-11	ELECT CHIP	47uF	20%	16V
C635	1-126-400-11	ELECT	22uF	20%	35V
C641	1-126-400-11	ELECT	22uF	20%	35V
C642	1-126-400-11	ELECT	22uF	20%	35V
C643	1-126-400-11	ELECT	22uF	20%	35V
C647	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C653	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C654	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C656	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C657	1-126-400-11	ELECT	22uF	20%	35V
C658	1-126-400-11	ELECT	22uF	20%	35V
C660	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C662	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C663	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C665	1-135-164-21	TANTAL. CHIP	22uF	20%	20V
C666	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C673	1-126-400-11	ELECT	22uF	20%	35V

< CONNECTOR >

CN001	1-568-207-11	CONNECTOR, FPC (ZIF) 23P	
CN002	1-566-543-31	CONNECTOR, FPC (NON ZIF) 11P	
CN003	1-566-542-31	CONNECTOR, FPC (NON ZIF) 10P	
CN004	1-566-532-11	CONNECTOR, FPC (ZIF) 16P	
CN005	1-506-487-11	PIN, CONNECTOR 8P	
CN006	1-506-483-21	PIN, CONNECTOR 4P	
CN007	1-506-471-11	PIN, CONNECTOR 6P	

< DIODE >

D031	8-719-200-27	DIODE	E10DS2
D032	8-719-200-27	DIODE	E10DS2
D501	8-719-800-76	DIODE	1SS226
D502	8-719-800-76	DIODE	1SS226
D503	8-719-800-76	DIODE	1SS226
D504	8-719-800-76	DIODE	1SS226
D505	8-719-800-76	DIODE	1SS226
D601	8-719-800-76	DIODE	1SS226
D602	8-719-800-76	DIODE	1SS226
D603	8-719-800-76	DIODE	1SS226

< IC >

IC001	8-759-100-96	IC	uPC4558G2
IC002	8-759-708-08	IC	NJM78L08A
IC003	8-759-700-67	IC	NJM79L08A
IC004	8-759-100-96	IC	uPC4558G2
IC005	8-759-100-96	IC	uPC4558G2
IC006	8-759-982-20	IC	RC78L02A
IC051	8-759-700-45	IC	NJM4556M-A
IC061	8-759-700-45	IC	NJM4556M-A
IC071	8-759-603-27	IC	M5201FP
IC072	8-759-603-27	IC	M5201FP
IC073	8-759-635-26	IC	M5283P
IC505	8-759-100-96	IC	uPC4558G2
IC506	8-759-100-96	IC	uPC4558G2
IC507	8-759-100-96	IC	uPC4558G2
IC509	8-759-100-96	IC	uPC4558G2
IC510	8-759-932-64	IC	BU4052BF
IC511	8-759-932-64	IC	BU4052BF
IC512	8-759-635-26	IC	M5283P
IC513	8-759-635-26	IC	M5283P
IC514	8-759-635-26	IC	M5283P
IC515	8-759-100-96	IC	uPC4558G2
IC516	8-759-603-27	IC	M5201FP
IC518	8-759-932-64	IC	BU4052BF
IC519	8-759-100-96	IC	uPC4558G2
IC520	8-759-100-96	IC	uPC4558G2
IC603	8-759-100-96	IC	uPC4558G2
IC605	8-759-100-96	IC	uPC4558G2
IC616	8-759-603-27	IC	M5201FP
IC620	8-759-100-96	IC	uPC4558G2

< COIL >

L001	1-410-671-31	INDUCTOR	47uH
L002	1-410-671-31	INDUCTOR	47uH
L003	1-410-671-31	INDUCTOR	47uH

< TRANSISTOR >

Q001	8-729-900-53	TRANSISTOR	DTC114EK
Q002	8-729-900-53	TRANSISTOR	DTC114EK
Q003	8-729-900-53	TRANSISTOR	DTC114EK
Q004	8-729-900-53	TRANSISTOR	DTC114EK
Q005	8-729-900-53	TRANSISTOR	DTC114EK
Q006	8-729-900-53	TRANSISTOR	DTC114EK
Q007	8-729-900-53	TRANSISTOR	DTC114EK
Q031	8-729-101-07	TRANSISTOR	2SB798-DL
Q051	8-729-202-38	TRANSISTOR	2SC3326N-A
Q052	8-729-202-38	TRANSISTOR	2SC3326N-A
Q061	8-729-202-38	TRANSISTOR	2SC3326N-A
Q062	8-729-202-38	TRANSISTOR	2SC3326N-A
Q071	8-729-901-04	TRANSISTOR	DTA114EK
Q072	8-729-901-06	TRANSISTOR	DTA144EK

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R001	1-216-833-11	METAL CHIP	10K	5%	1/16W
R002	1-216-834-11	METAL CHIP	12K	5%	1/16W
R003	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R004	1-216-833-11	METAL CHIP	10K	5%	1/16W
R005	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R011	1-216-833-11	METAL CHIP	10K	5%	1/16W
R012	1-216-834-11	METAL CHIP	12K	5%	1/16W
R013	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R021	1-216-845-11	METAL CHIP	100K	5%	1/16W
R022	1-216-845-11	METAL CHIP	100K	5%	1/16W
R023	1-216-845-11	METAL CHIP	100K	5%	1/16W
R024	1-216-845-11	METAL CHIP	100K	5%	1/16W
R025	1-216-845-11	METAL CHIP	100K	5%	1/16W
R026	1-216-845-11	METAL CHIP	100K	5%	1/16W
R027	1-216-841-11	METAL CHIP	47K	5%	1/16W
R031	1-216-841-11	METAL CHIP	47K	5%	1/16W
R032	1-216-833-11	METAL CHIP	10K	5%	1/16W
R033	1-216-833-11	METAL CHIP	10K	5%	1/16W
R052	1-216-849-11	METAL CHIP	220K	5%	1/16W
R053	1-216-833-11	METAL CHIP	10K	5%	1/16W
R054	1-216-043-91	METAL GLAZE	560	5%	1/10W
R055	1-216-833-11	METAL CHIP	10K	5%	1/16W
R056	1-216-043-91	METAL GLAZE	560	5%	1/10W
R057	1-216-833-11	METAL CHIP	10K	5%	1/16W
R058	1-216-845-11	METAL CHIP	100K	5%	1/16W
R061	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R062	1-216-849-11	METAL CHIP	220K	5%	1/16W
R063	1-216-833-11	METAL CHIP	10K	5%	1/16W
R064	1-216-043-91	METAL GLAZE	560	5%	1/10W
R065	1-216-833-11	METAL CHIP	10K	5%	1/16W
R066	1-216-043-91	METAL GLAZE	560	5%	1/10W
R067	1-216-833-11	METAL CHIP	10K	5%	1/16W
R068	1-216-845-11	METAL CHIP	100K	5%	1/16W
R070	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R071	1-216-841-11	METAL CHIP	47K	5%	1/16W
R072	1-216-841-11	METAL CHIP	47K	5%	1/16W
R073	1-216-841-11	METAL CHIP	47K	5%	1/16W
R074	1-216-841-11	METAL CHIP	47K	5%	1/16W
R075	1-216-849-11	METAL CHIP	220K	5%	1/16W
R076	1-216-845-11	METAL CHIP	100K	5%	1/16W
R077	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R078	1-216-836-11	METAL CHIP	18K	5%	1/16W
R079	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R080	1-216-864-11	METAL CHIP	0	5%	1/16W
R081	1-216-849-11	METAL CHIP	220K	5%	1/16W
R082	1-216-833-11	METAL CHIP	10K	5%	1/16W
R083	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R084	1-216-836-11	METAL CHIP	18K	5%	1/16W
R085	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R086	1-216-841-11	METAL CHIP	47K	5%	1/16W
R087	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R088	1-216-842-11	METAL CHIP	56K	5%	1/16W
R089	1-216-849-11	METAL CHIP	220K	5%	1/16W
R090	1-216-833-11	METAL CHIP	10K	5%	1/16W
R093	1-216-045-00	METAL CHIP	680	5%	1/10W
R094	1-216-045-00	METAL CHIP	680	5%	1/10W
R095	1-216-045-00	METAL CHIP	680	5%	1/10W
R096	1-216-045-00	METAL CHIP	680	5%	1/10W
R097	1-216-993-11	METAL GLAZE	2.4K	5%	1/16W
R098	1-216-821-11	METAL CHIP	1K	5%	1/16W
R099	1-216-842-11	METAL CHIP	56K	5%	1/16W
R100	1-216-849-11	METAL CHIP	220K	5%	1/16W
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R506	1-216-821-11	METAL CHIP	1K	5%	1/16W
R507	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R512	1-216-821-11	METAL CHIP	1K	5%	1/16W
R513	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R516	1-216-821-11	METAL CHIP	1K	5%	1/16W
R517	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R525	1-216-849-11	METAL CHIP	220K	5%	1/16W
R526	1-216-821-11	METAL CHIP	1K	5%	1/16W
R527	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R528	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R529	1-216-833-11	METAL CHIP	10K	5%	1/16W
R531	1-216-814-11	METAL CHIP	270	5%	1/16W
R532	1-216-814-11	METAL CHIP	270	5%	1/16W
R533	1-216-814-11	METAL CHIP	270	5%	1/16W
R534	1-216-814-11	METAL CHIP	270	5%	1/16W
R535	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R536	1-216-833-11	METAL CHIP	10K	5%	1/16W
R550	1-216-849-11	METAL CHIP	220K	5%	1/16W
R551	1-216-833-11	METAL CHIP	10K	5%	1/16W
R552	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R553	1-216-839-11	METAL CHIP	33K	5%	1/16W
R554	1-216-833-11	METAL CHIP	10K	5%	1/16W
R555	1-216-833-11	METAL CHIP	10K	5%	1/16W
R556	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R557	1-216-839-11	METAL CHIP	33K	5%	1/16W
R558	1-216-833-11	METAL CHIP	10K	5%	1/16W
R559	1-216-849-11	METAL CHIP	220K	5%	1/16W
R561	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R562	1-216-833-11	METAL CHIP	10K	5%	1/16W
R563	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R564	1-216-833-11	METAL CHIP	10K	5%	1/16W
R566	1-216-833-11	METAL CHIP	10K	5%	1/16W
R567	1-216-849-11	METAL CHIP	220K	5%	1/16W
R569	1-216-864-11	METAL CHIP	0	5%	1/16W
R570	1-216-833-11	METAL CHIP	10K	5%	1/16W

		Remarks
047		16V
uF	20%	16V
uF	20%	16V
uF	20%	16V
uF	20%	16V
uF	20%	16V
uF	20%	16V
uF	20%	16V
uF	20%	35V
uF	20%	35V
uF	20%	35V
uF	20%	20V
uF	20%	20V
uF	20%	20V
uF	20%	16V
uF	20%	35V
uF	20%	35V
3uF	20%	50V
uF	20%	16V
uF	20%	20V
uF	20%	20V
1uF		16V
uF	20%	35V
04		16V

(F) 3P
N ZIF) 11P
N ZIF) 10P
F) 5P

Ref. No.	Part No.	Description		Remarks
IC003	8-759-700-67	IC	NJM79L08A	
IC004	8-759-100-96	IC	uPC4558G2	
IC005	8-759-100-96	IC	uPC4558G2	
IC006	8-759-982-20	IC	RC78L02A	
IC051	8-759-700-45	IC	NJM4556M-A	
IC061	8-759-700-45	IC	NJM4556M-A	
IC071	8-759-603-27	IC	M5201FP	
IC072	8-759-603-27	IC	M5201FP	
IC073	8-759-635-26	IC	M5283P	
IC505	8-759-100-96	IC	uPC4558G2	
IC506	8-759-100-96	IC	uPC4558G2	
IC507	8-759-100-96	IC	uPC4558G2	
IC509	8-759-100-96	IC	uPC4558G2	
IC510	8-759-932-64	IC	BU4052BF	
IC511	8-759-932-64	IC	BU4052BF	
IC512	8-759-635-26	IC	M5283P	
IC513	8-759-635-26	IC	M5283P	
IC514	8-759-635-26	IC	M5283P	
IC515	8-759-100-96	IC	uPC4558G2	
IC516	8-759-603-27	IC	M5201FP	
IC518	8-759-932-64	IC	BU4052BF	
IC519	8-759-100-96	IC	uPC4558G2	
IC520	8-759-100-96	IC	uPC4558G2	
IC603	8-759-100-96	IC	uPC4558G2	
IC605	8-759-100-96	IC	uPC4558G2	
IC606	8-759-100-96	IC	uPC4558G2	
IC616	8-759-603-27	IC	M5201FP	
IC620	8-759-100-96	IC	uPC4558G2	

< COIL >

L001	1-410-671-31	INDUCTOR	47uH
L002	1-410-671-31	INDUCTOR	47uH
L003	1-410-671-31	INDUCTOR	47uH

< TRANSISTOR >

Q001	8-729-900-53	TRANSISTOR	DTC114EK
Q002	8-729-900-53	TRANSISTOR	DTC114EK
Q003	8-729-900-53	TRANSISTOR	DTC114EK
Q004	8-729-900-53	TRANSISTOR	DTC114EK
Q005	8-729-900-53	TRANSISTOR	DTC114EK
Q006	8-729-900-53	TRANSISTOR	DTC114EK
Q007	8-729-900-53	TRANSISTOR	DTC114EK
Q031	8-729-101-07	TRANSISTOR	2SB798-DL
Q051	8-729-202-38	TRANSISTOR	2SC3326N-A
Q052	8-729-202-38	TRANSISTOR	2SC3326N-A
Q061	8-729-202-38	TRANSISTOR	2SC3326N-A
Q062	8-729-202-38	TRANSISTOR	2SC3326N-A
Q071	8-729-901-04	TRANSISTOR	DTA114EK
Q072	8-729-901-06	TRANSISTOR	DTA144EK

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R001	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R002	1-216-834-11	METAL CHIP	12K	5% 1/16W	
R003	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R004	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R005	1-216-825-11	METAL CHIP	2.2K	5% 1/16W	
R011	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R012	1-216-834-11	METAL CHIP	12K	5% 1/16W	
R013	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R021	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R022	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R023	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R024	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R025	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R026	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R027	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R031	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R032	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R033	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R052	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R053	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R054	1-216-043-91	METAL GLAZE	560	5% 1/10W	
R055	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R056	1-216-043-91	METAL GLAZE	560	5% 1/10W	
R057	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R058	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R061	1-216-071-00	METAL CHIP	8.2K	5% 1/10W	
R062	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R063	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R064	1-216-043-91	METAL GLAZE	560	5% 1/10W	
R065	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R066	1-216-043-91	METAL GLAZE	560	5% 1/10W	
R067	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R068	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R070	1-216-828-11	METAL CHIP	3.9K	5% 1/16W	
R071	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R072	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R073	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R074	1-216-841-11	METAL CHIP	47K	5% 1/16W	
R075	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R076	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R077	1-216-071-00	METAL CHIP	8.2K	5% 1/10W	
R078	1-216-836-11	METAL CHIP	18K	5% 1/16W	
R079	1-216-824-11	METAL CHIP	1.8K	5% 1/16W	
R080	1-216-864-11	METAL CHIP	0	5% 1/16W	
R081	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R082	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R083	1-216-828-11	METAL CHIP	3.9K	5% 1/16W	
R084	1-216-836-11	METAL CHIP	18K	5% 1/16W	
R085	1-216-824-11	METAL CHIP	1.8K	5% 1/16W	
R086	1-216-841-11	METAL CHIP	47K	5% 1/16W	

Ref. No.	Part No.	Description			Remarks
R087	1-216-071-00	METAL CHIP	8.2K	5% 1/10W	
R088	1-216-842-11	METAL CHIP	56K	5% 1/16W	
R089	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R090	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R093	1-216-045-00	METAL CHIP	680	5% 1/10W	
R094	1-216-045-00	METAL CHIP	680	5% 1/10W	
R095	1-216-045-00	METAL CHIP	680	5% 1/10W	
R096	1-216-045-00	METAL CHIP	680	5% 1/10W	
R097	1-216-993-11	METAL GLAZE	2.4K	5% 1/16W	
R098	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R099	1-216-842-11	METAL CHIP	56K	5% 1/16W	
R100	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R502	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R503	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R506	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R507	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R512	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R513	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R516	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R517	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R522	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R523	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R525	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R526	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R527	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R528	1-216-827-11	METAL CHIP	3.3K	5% 1/16W	
R529	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R531	1-216-814-11	METAL CHIP	270	5% 1/16W	
R532	1-216-814-11	METAL CHIP	270	5% 1/16W	
R533	1-216-814-11	METAL CHIP	270	5% 1/16W	
R534	1-216-814-11	METAL CHIP	270	5% 1/16W	
R535	1-216-827-11	METAL CHIP	3.3K	5% 1/16W	
R536	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R550	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R551	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R552	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R553	1-216-839-11	METAL CHIP	33K	5% 1/16W	
R554	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R555	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R556	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R557	1-216-839-11	METAL CHIP	33K	5% 1/16W	
R558	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R559	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R561	1-216-827-11	METAL CHIP	3.3K	5% 1/16W	
R562	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R563	1-218-345-11	METAL GLAZE	9.1K	5% 1/16W	
R564	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R566	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R567	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R569	1-216-864-11	METAL CHIP	0	5% 1/16W	
R570	1-216-833-11	METAL CHIP	10K	5% 1/16W	

Ref. No.	Part No.	Description			Remarks
R571	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R572	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R573	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R574	1-216-842-11	METAL CHIP	56K	5% 1/16W	
R575	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R576	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R577	1-216-836-11	METAL CHIP	18K	5% 1/16W	
R578	1-216-842-11	METAL CHIP	56K	5% 1/16W	
R579	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R580	1-216-993-11	METAL GLAZE	2.4K	5% 1/16W	
R581	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R583	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R584	1-216-842-11	METAL CHIP	56K	5% 1/16W	
R585	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R586	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R593	1-216-864-11	METAL CHIP	0	5% 1/16W	
R594	1-216-827-11	METAL CHIP	3.3K	5% 1/16W	
R595	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R602	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R603	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R606	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R607	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R612	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R613	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R616	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R617	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R622	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R623	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R625	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R626	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R627	1-218-272-11	METAL GLAZE	5.1K	5% 1/16W	
R628	1-216-827-11	METAL CHIP	3.3K	5% 1/16W	
R629	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R631	1-216-814-11	METAL CHIP	270	5% 1/16W	
R632	1-216-814-11	METAL CHIP	270	5% 1/16W	
R633	1-216-814-11	METAL CHIP	270	5% 1/16W	
R634	1-216-814-11	METAL CHIP	270	5% 1/16W	
R635	1-216-827-11	METAL CHIP	3.3K	5% 1/16W	
R636	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R650	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R651	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R652	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R653	1-216-839-11	METAL CHIP	33K	5% 1/16W	
R654	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R655	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R656	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R657	1-216-839-11	METAL CHIP	33K	5% 1/16W	
R658	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R659	1-216-849-11	METAL CHIP	220K	5% 1/16W	
R661	1-216-827-11	METAL CHIP	3.3K	5% 1/16W	
R662	1-216-833-11	METAL CHIP	10K	5% 1/16W	

cription				Remarks
SISTOR >				
L CHIP	10K	5%	1/16W	
L CHIP	12K	5%	1/16W	
L CHIP	4.7K	5%	1/16W	
L CHIP	10K	5%	1/16W	
L CHIP	2.2K	5%	1/16W	
L CHIP	10K	5%	1/16W	
L CHIP	12K	5%	1/16W	
L CHIP	4.7K	5%	1/16W	
L CHIP	100K	5%	1/16W	
L CHIP	100K	5%	1/16W	
L CHIP	100K	5%	1/16W	
L CHIP	100K	5%	1/16W	
L CHIP	100K	5%	1/16W	
L CHIP	47K	5%	1/16W	
AL CHIP	47K	5%	1/16W	
AL CHIP	10K	5%	1/16W	
AL CHIP	10K	5%	1/16W	
AL CHIP	220K	5%	1/16W	
AL CHIP	10K	5%	1/16W	
AL GLAZE	560	5%	1/10W	
AL CHIP	10K	5%	1/16W	
AL GLAZE	560	5%	1/10W	
AL CHIP	10K	5%	1/16W	
AL CHIP	8.2K	5%	1/10W	
AL CHIP	220K	5%	1/16W	
AL CHIP	10K	5%	1/16W	
AL GLAZE	560	5%	1/10W	
AL CHIP	10K	5%	1/16W	
AL GLAZE	560	5%	1/10W	
AL CHIP	10K	5%	1/16W	
AL CHIP	100K	5%	1/16W	
AL CHIP	3.9K	5%	1/16W	
AL CHIP	47K	5%	1/16W	
AL CHIP	47K	5%	1/16W	
AL CHIP	47K	5%	1/16W	
AL CHIP	220K	5%	1/16W	
AL CHIP	100K	5%	1/16W	
AL CHIP	8.2K	5%	1/10W	
AL CHIP	18K	5%	1/16W	
AL CHIP	1.8K	5%	1/16W	
AL CHIP	0	5%	1/16W	
AL CHIP	220K	5%	1/16W	
AL CHIP	10K	5%	1/16W	
AL CHIP	3.9K	5%	1/16W	
AL CHIP	18K	5%	1/16W	
AL CHIP	1.8K	5%	1/16W	
AL CHIP	47K	5%	1/16W	

Ref. No.	Part No.	Description			Remarks
R087	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R088	1-216-842-11	METAL CHIP	56K	5%	1/16W
R089	1-216-849-11	METAL CHIP	220K	5%	1/16W
R090	1-216-833-11	METAL CHIP	10K	5%	1/16W
R093	1-216-045-00	METAL CHIP	680	5%	1/10W
R094	1-216-045-00	METAL CHIP	680	5%	1/10W
R095	1-216-045-00	METAL CHIP	680	5%	1/10W
R096	1-216-045-00	METAL CHIP	680	5%	1/10W
R097	1-216-993-11	METAL GLAZE	2.4K	5%	1/16W
R098	1-216-821-11	METAL CHIP	1K	5%	1/16W
R099	1-216-842-11	METAL CHIP	56K	5%	1/16W
R100	1-216-849-11	METAL CHIP	220K	5%	1/16W
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R506	1-216-821-11	METAL CHIP	1K	5%	1/16W
R507	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R512	1-216-821-11	METAL CHIP	1K	5%	1/16W
R513	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R516	1-216-821-11	METAL CHIP	1K	5%	1/16W
R517	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R525	1-216-849-11	METAL CHIP	220K	5%	1/16W
R526	1-216-821-11	METAL CHIP	1K	5%	1/16W
R527	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R528	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R529	1-216-833-11	METAL CHIP	10K	5%	1/16W
R531	1-216-814-11	METAL CHIP	270	5%	1/16W
R532	1-216-814-11	METAL CHIP	270	5%	1/16W
R533	1-216-814-11	METAL CHIP	270	5%	1/16W
R534	1-216-814-11	METAL CHIP	270	5%	1/16W
R535	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R536	1-216-833-11	METAL CHIP	10K	5%	1/16W
R550	1-216-849-11	METAL CHIP	220K	5%	1/16W
R551	1-216-833-11	METAL CHIP	10K	5%	1/16W
R552	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R553	1-216-839-11	METAL CHIP	33K	5%	1/16W
R554	1-216-833-11	METAL CHIP	10K	5%	1/16W
R555	1-216-833-11	METAL CHIP	10K	5%	1/16W
R556	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R557	1-216-839-11	METAL CHIP	33K	5%	1/16W
R558	1-216-833-11	METAL CHIP	10K	5%	1/16W
R559	1-216-849-11	METAL CHIP	220K	5%	1/16W
R561	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R562	1-216-833-11	METAL CHIP	10K	5%	1/16W
R563	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R564	1-216-833-11	METAL CHIP	10K	5%	1/16W
R566	1-216-833-11	METAL CHIP	10K	5%	1/16W
R567	1-216-849-11	METAL CHIP	220K	5%	1/16W
R569	1-216-864-11	METAL CHIP	0	5%	1/16W
R570	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R571	1-216-849-11	METAL CHIP	220K	5%	1/16W
R572	1-216-849-11	METAL CHIP	220K	5%	1/16W
R573	1-216-849-11	METAL CHIP	220K	5%	1/16W
R574	1-216-842-11	METAL CHIP	56K	5%	1/16W
R575	1-216-833-11	METAL CHIP	10K	5%	1/16W
R576	1-216-833-11	METAL CHIP	10K	5%	1/16W
R577	1-216-836-11	METAL CHIP	18K	5%	1/16W
R578	1-216-842-11	METAL CHIP	56K	5%	1/16W
R579	1-216-849-11	METAL CHIP	220K	5%	1/16W
R580	1-216-993-11	METAL GLAZE	2.4K	5%	1/16W
R581	1-216-849-11	METAL CHIP	220K	5%	1/16W
R583	1-216-833-11	METAL CHIP	10K	5%	1/16W
R584	1-216-842-11	METAL CHIP	56K	5%	1/16W
R585	1-216-833-11	METAL CHIP	10K	5%	1/16W
R586	1-216-833-11	METAL CHIP	10K	5%	1/16W
R593	1-216-864-11	METAL CHIP	0	5%	1/16W
R594	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R595	1-216-833-11	METAL CHIP	10K	5%	1/16W
R602	1-216-821-11	METAL CHIP	1K	5%	1/16W
R603	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R606	1-216-821-11	METAL CHIP	1K	5%	1/16W
R607	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R612	1-216-821-11	METAL CHIP	1K	5%	1/16W
R613	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R616	1-216-821-11	METAL CHIP	1K	5%	1/16W
R617	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R622	1-216-821-11	METAL CHIP	1K	5%	1/16W
R623	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R625	1-216-849-11	METAL CHIP	220K	5%	1/16W
R626	1-216-821-11	METAL CHIP	1K	5%	1/16W
R627	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R628	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R629	1-216-833-11	METAL CHIP	10K	5%	1/16W
R631	1-216-814-11	METAL CHIP	270	5%	1/16W
R632	1-216-814-11	METAL CHIP	270	5%	1/16W
R633	1-216-814-11	METAL CHIP	270	5%	1/16W
R634	1-216-814-11	METAL CHIP	270	5%	1/16W
R635	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R636	1-216-833-11	METAL CHIP	10K	5%	1/16W
R650	1-216-849-11	METAL CHIP	220K	5%	1/16W
R651	1-216-833-11	METAL CHIP	10K	5%	1/16W
R652	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R653	1-216-839-11	METAL CHIP	33K	5%	1/16W
R654	1-216-833-11	METAL CHIP	10K	5%	1/16W
R655	1-216-833-11	METAL CHIP	10K	5%	1/16W
R656	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R657	1-216-839-11	METAL CHIP	33K	5%	1/16W
R658	1-216-833-11	METAL CHIP	10K	5%	1/16W
R659	1-216-849-11	METAL CHIP	220K	5%	1/16W
R661	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R662	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R663	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R664	1-216-833-11	METAL CHIP	10K	5%	1/16W
R666	1-216-833-11	METAL CHIP	10K	5%	1/16W
R667	1-216-849-11	METAL CHIP	220K	5%	1/16W
R669	1-216-864-11	METAL CHIP	0	5%	1/16W
R670	1-216-833-11	METAL CHIP	10K	5%	1/16W
R671	1-216-849-11	METAL CHIP	220K	5%	1/16W
R672	1-216-849-11	METAL CHIP	220K	5%	1/16W
R673	1-216-849-11	METAL CHIP	220K	5%	1/16W
R674	1-216-842-11	METAL CHIP	56K	5%	1/16W
R675	1-216-833-11	METAL CHIP	10K	5%	1/16W
R676	1-216-833-11	METAL CHIP	10K	5%	1/16W
R677	1-216-836-11	METAL CHIP	18K	5%	1/16W
R678	1-216-842-11	METAL CHIP	56K	5%	1/16W
R679	1-216-849-11	METAL CHIP	220K	5%	1/16W
R680	1-216-821-11	METAL CHIP	1K	5%	1/16W
R681	1-216-849-11	METAL CHIP	220K	5%	1/16W
R683	1-216-833-11	METAL CHIP	10K	5%	1/16W
R684	1-216-842-11	METAL CHIP	56K	5%	1/16W
R685	1-216-833-11	METAL CHIP	10K	5%	1/16W
R686	1-216-833-11	METAL CHIP	10K	5%	1/16W
R693	1-216-864-11	METAL CHIP	0	5%	1/16W
R694	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R695	1-216-833-11	METAL CHIP	10K	5%	1/16W

< VARIABLE RESISTOR >

RV001	1-223-530-11	RES, VAR, CARBON 20K/20K (MAIN P1)
RV002	1-223-530-11	RES, VAR, CARBON 20K/20K (SUB P1)
RV003	1-223-530-11	RES, VAR, CARBON 20K/20K (MAIN P2)
RV004	1-223-530-11	RES, VAR, CARBON 20K/20K (SUB P2)
RV005	1-223-530-11	RES, VAR, CARBON 20K/20K (AUX 1)
RV006	1-223-530-11	RES, VAR, CARBON 20K/20K (MONI OUT)

< SWITCH >

S001	1-570-865-11	SWITCH, SLIDE (AUDIO INPUT LEVEL)

[redacted]

*	A-7066-664-A	AS-46P BOARD, COMPLETE

****

(Ref.No.1,000 Series)

	1-751-562-11	CABLE, FLAT (FAR-1)
*	3-957-048-01	COVER, SLIDE KNOB
*	3-957-061-01	BASE, SLIDE KNOB

< CONNECTOR >

CN901	1-566-527-11	CONNECTOR, FPC (ZIF) 11P

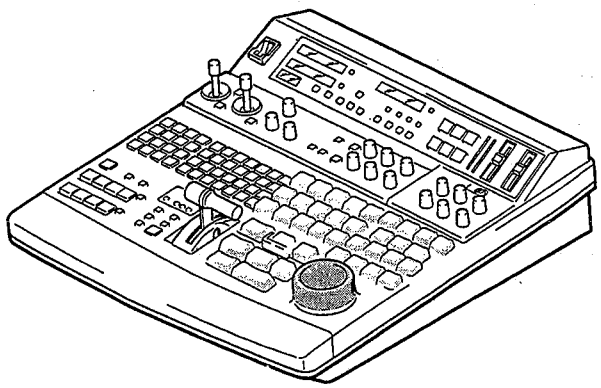
< VARIABLE RESISTOR >

RV901	1-241-315-11	RES, VAR, SLIDE 5K/5K (AUX 2/MIC)
RV902	1-241-315-11	RES, VAR, SLIDE 5K/5K (MASTER)

FXE-100P

SERVICE MANUAL

AEP Model
UK Model
E Model



SPECIFICATIONS

General

Signal system	PAL
Power requirements	AEP model: 220–230 V AC, 50/60 Hz UK model: 240 V AC, 50/60 Hz E model: 120–220–240 V AC, 50/60 Hz
Power consumtption	Maximum 52 W
Operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	–20°C to +60°C (–4°F to 140°F)
Mass	Approximately 7.3 kg (16 lb 1 oz)
Dimensions (w/h/d)	424 × 138.5 × 437.5 mm (16 3/4 × 5 1/2 × 17 1/4 inches)

Editing controller functions

CPU	16 bit
Time counter	Internal time counter (× 3)
Time count display range	(hours:minutes:seconds:frames) • Time code: 00:00:00:00 to 23:59:59:24 • CTL: ±9:59:59:24
Edit modes	• Insert (channels: video, audio 1, audio 2) • Assemble • First edit • Time code insert • Split (audio split offset from video IN point) • Dynamic Motion Control (DMC)
Edit reference signals	• CTL signal • SMPTE/EBU time code (LTC) • 8 mm time code
Editing precision	RS-422 interface: ±0 frames (time code) ±1 frame (CTL) RS-232C interface: ±1 frame (time code)
Transition time range	0 to 999 (unit: frames)
Pinch-on delay	Simultaneous measurement of pinch-on delay for up to three VCRs connected to RS-422/RS-232C connectors. Measurement data stored in memory.
EDL memory capacity	99 edits

Control functions

VCR interfaces	
RS-422	RS-422 (D-sub 9-pin) × 3 PLAYER 1, PLAYER 2, RECORDER Connectable VCRs: Hi8: EVO-9850P/9800P S-VHS: SVO-9620, SVP-9020 Betacam: UVW-1800P (recorder) U-matic: VO-9800P/9850P
RS-232C	RS-232C (D-sub 9-pin) × 3 PLAYER 1, PLAYER 2, RECORDER Connectable VCRs: Hi8: EVO-9650P
VCR remote control functions	Playback, still playback, rewind, standby off, stop, jog control, shuttle control, record, eject, stop all VCRs
GPI interface	GPI OUT (BNC) × 2 GPI IN (BNC)
EDL interface	EDL IN/OUT (D-sub 9-pin)

Input connectors

Video input	
S-video	S VIDEO INPUT (mini DIN 4-pin) × 4, unbalanced PLAYER 1, PLAYER 2, AUX 1, RECORDER • Y: 1.0 V p-p, 75 Ω, sync negative • C: 0.3 V p-p, burst, 75 Ω • Sync: 0.3 Vp-p
Composite video	VIDEO INPUT (BNC) × 4, unbalanced PLAYER 1, PLAYER 2, AUX 1, RECORDER • Video: 1.0 V p-p,75 Ω, sync negative • Sync: 0.3 Vp-p • Burst: 0.3 Vp-p

– Continued on next page –

MICROFILM

VIDEO EDITING SYSTEM

SONY

Audio input

Stereo	AUDIO L/R INPUT (phono jack), 2 channels × 5 PLAYER 1 MAIN (2), SUB (2) PLAYER 2 MAIN (2), SUB (2) RECORDER (2) AUX 1 (2) AUX 2 (2) Impedance selectable with 600 Ω termination switch. Input level: –7.5 dBs [1] (input impedance 47k Ω or above, 600 Ω switch OFF) +4 dBs [1] (input impedance 600 Ω, 600 Ω switch ON)
Microphone	MIC (monaural phone), unbalanced • Input level: –60 dBs [1] • Input impedance: 4.4 kΩ or above

Output connectors

Video ouput

S-video	S VIDEO OUTPUT (mini DIN 4-pin) × 2, unbalanced PGM 1, PGM 2 • Y: 1.0 V p-p, 75 Ω, sync negative • C: 0.3 V p-p, burst, 75 Ω • Sync: 0.3 Vp-p
Composite video	VIDEO OUTPUT (BNC) × 3, unbalanced PGM 1, PGM 2, MONITOR • Video: 1.0 V p-p,75 Ω, sync negative • Sync: 0.3 Vp-p • Burst: 0.3 Vp-p
Black burst	B.B OUT (BNC) × 4, unbalanced • Sync: 0.3 V p-p, 75 Ω • Burst: 0.3 V p-p, 75 Ω
Audio output (stereo)	AUDIO L/R OUTPUT (phono jack) × 6 PGM 1 (2), PGM 2 (2), MONITOR (2) PGM 1, PGM 2 output level selectable with –7.5dB/+4dB switch

1) 0 dBs = 0.775 Vrms

Video characteristics

Sampling rate	Y: 910 fH [1] R–Y, B–Y: 1/4 × 910 fH
Quantizing	Y, R–Y, B–Y: 8-bit
Frequency	0 to 5 MHz, +1dB/–4dB 53 dB or above

Accessories supplied

AC power cord (1)
Operating Instructions (1)
Handbook (1)

Design and specifications are subject to change without notice.

Accessories not supplied

Remote control cables
- RS-422: RCC-5G/10G/30G (9-pin 5 m/10 m/30 m or approx. 16 f/33 f/98 f)
- RS-232C: SMF-3036C (9-pin/25-pin null modem cable)

XLR 3-pin/phono jack cross cables
- RK-5XLRM (male, 5 m or approx. 16 f)
- RK-5XLRF (female, 5 m or approx. 16 f)

1) 1 fH = 15.625 kHz

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and brides.

2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.

3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

4. Look for parts which, throught functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replace-ment.

5. Check the B+ voltage to see it is at the values specified.

6. Flexible Circuit Board Repairing
   - Keep the temperature of the soldering iron around 270 ℃ during repairing.
   - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
   - Be careful not to apply force on the conductor when soldering or unsoldering.

WARNING FOR THE CUSTOMERS IN THE UNITED KINGDOM
THIS APPARATUS MUST BE EARTHED.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

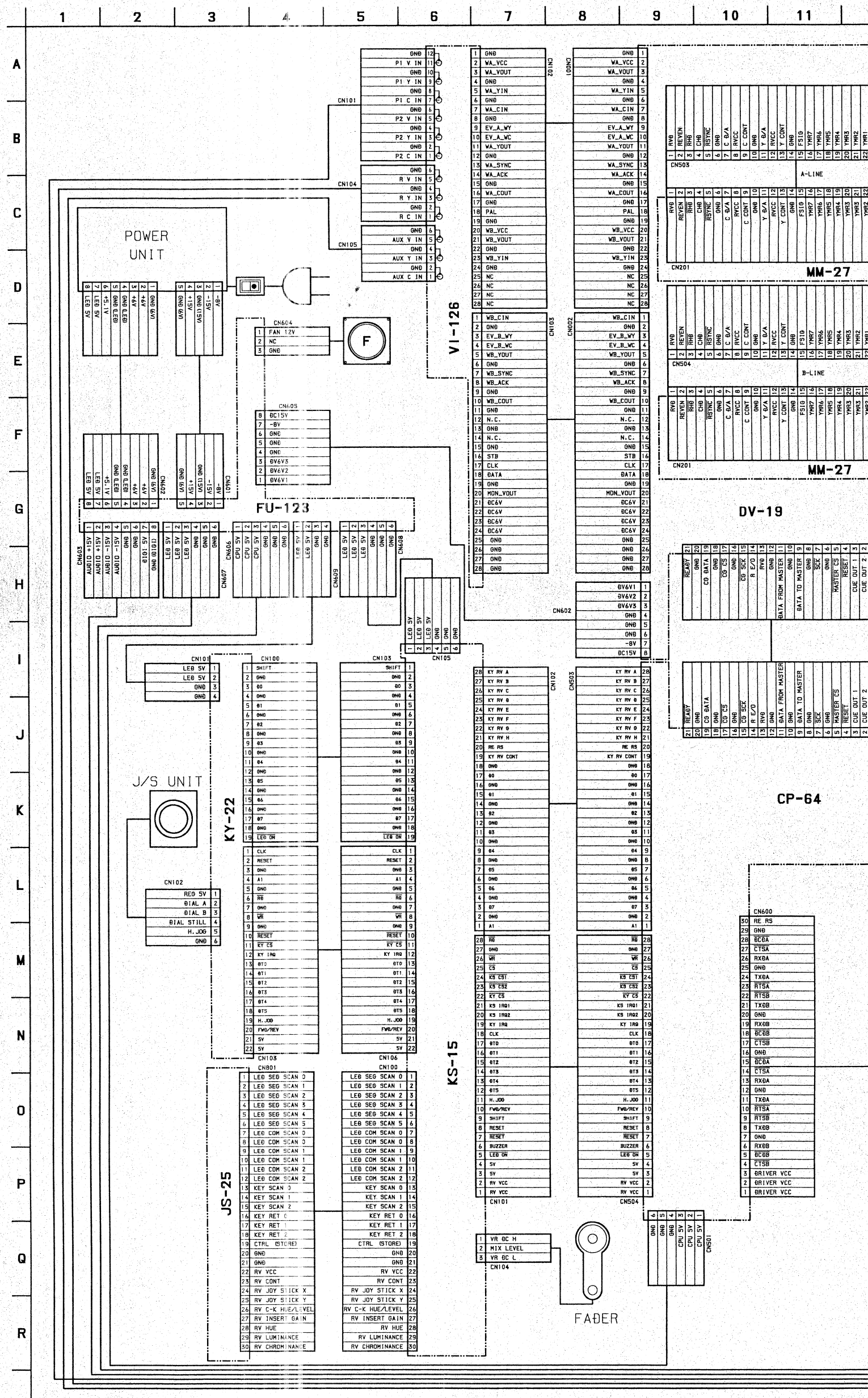
Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

SECTION 4
PRINTED WIRING BOARDS AND DIAGRAMS

1. FRAME SCHEMATIC DIAGRAM



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For printed wiring boards:

- ○—— : indicated a lead wire mounted on the component side.
- ○ : Through hole.
- ▒▒ : Pattern from the side which enables seeing.

(Other pattern is not shown.)

Caution :	
Side A: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Side B: (Component side)	Parts on the parts face side seen from the parts face are indicated.

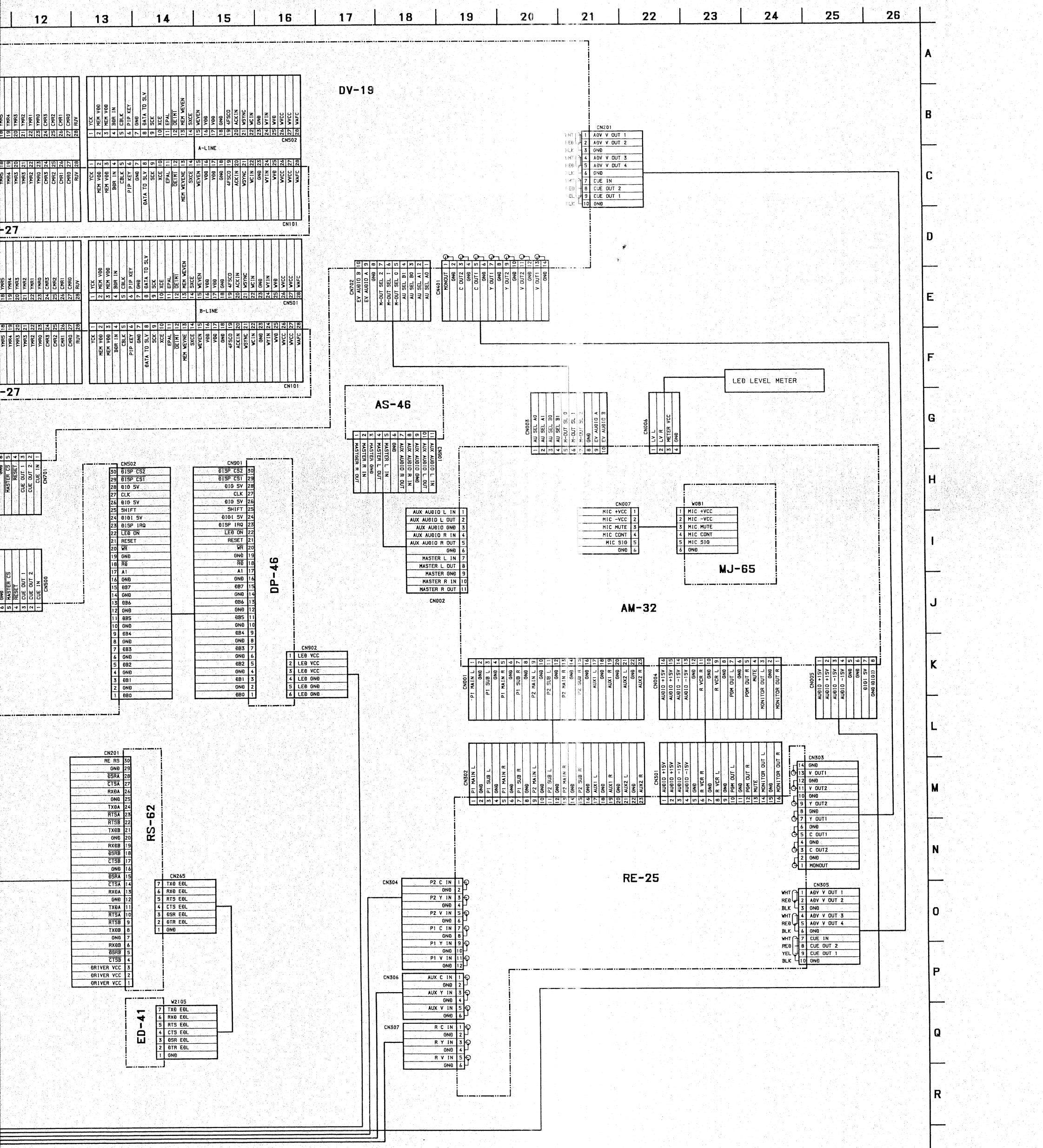
For schematic diagram:

- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4 W unless otherwise noted.
  Chip resistors: 1/10 W unless otherwise noted.
  kΩ : 1000 Ω , MΩ : 1000kΩ .
- All capacitors are in μF unless otherwise noted. pF: μμF.
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.
- △ : internal component.*
- ——— : B + Line.*
- — — — : B − Line.*
- : IN/OUT direction of B line (+, −).*
- Circled numbers refer to waveforms.*
- Voltage are dc between ground and measurement point when color bar is connected to PLAYER 1 and PLAYER 2.
  (input impedance: dc 10MΩ)
- Readings are taken with a color- bar signal input.*
- Readings are taken with a digital multimeter (DC10 MΩ).*
- Voltage are taken with a VOM (input impedance 10 MΩ).
- Voltage variations may be noted due to normal production tolerances.

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- * : indicated by the color red.


12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
A B C D E F G H I J K L M N O P Q R
DV-19
CN502
A-LINE
CN101
-27
CN501
B-LINE
CN101
-27
CN701
CN500
CN502
CN901
DP-46
CN902
CN201
RS-62
CN265
W2105
ED-41
CN702
CN401
AS-46
CN903
CN906
LED LEVEL METER
CN001
CN004
CN005
CN002
AM-32
CN007
W081
MJ-65
CN302
CN301
CN303
CN305
RE-25
CN304
CN306
CN307
4-2
4-3
FRAME

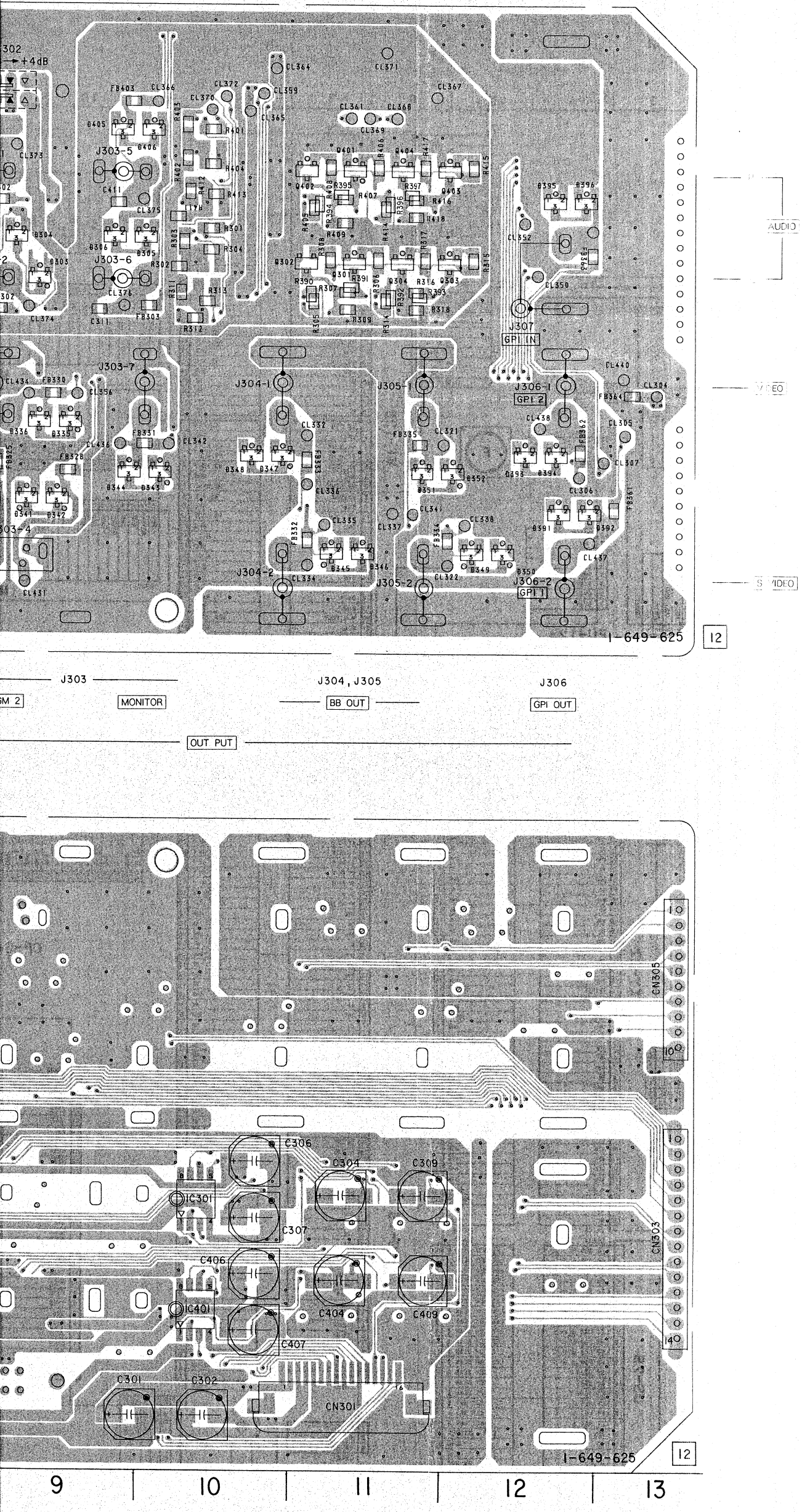
2. PRINTED WIRING BOARDS AND DIAGRAMS

RE-25 (VIDEO, AUDIO INPUT/OUTPUT) PRINTED WIRING BOARD

– Ref No. RE-25 BOARD : 3,000 Seriese –

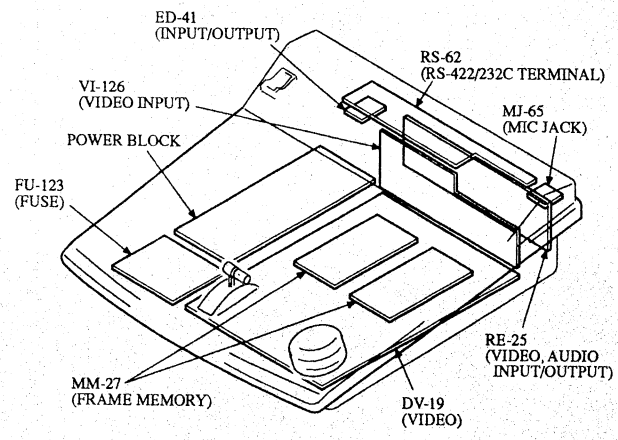
RE-25 BOARD (SIDE A)

RE-25 BOARD (SIDE B)



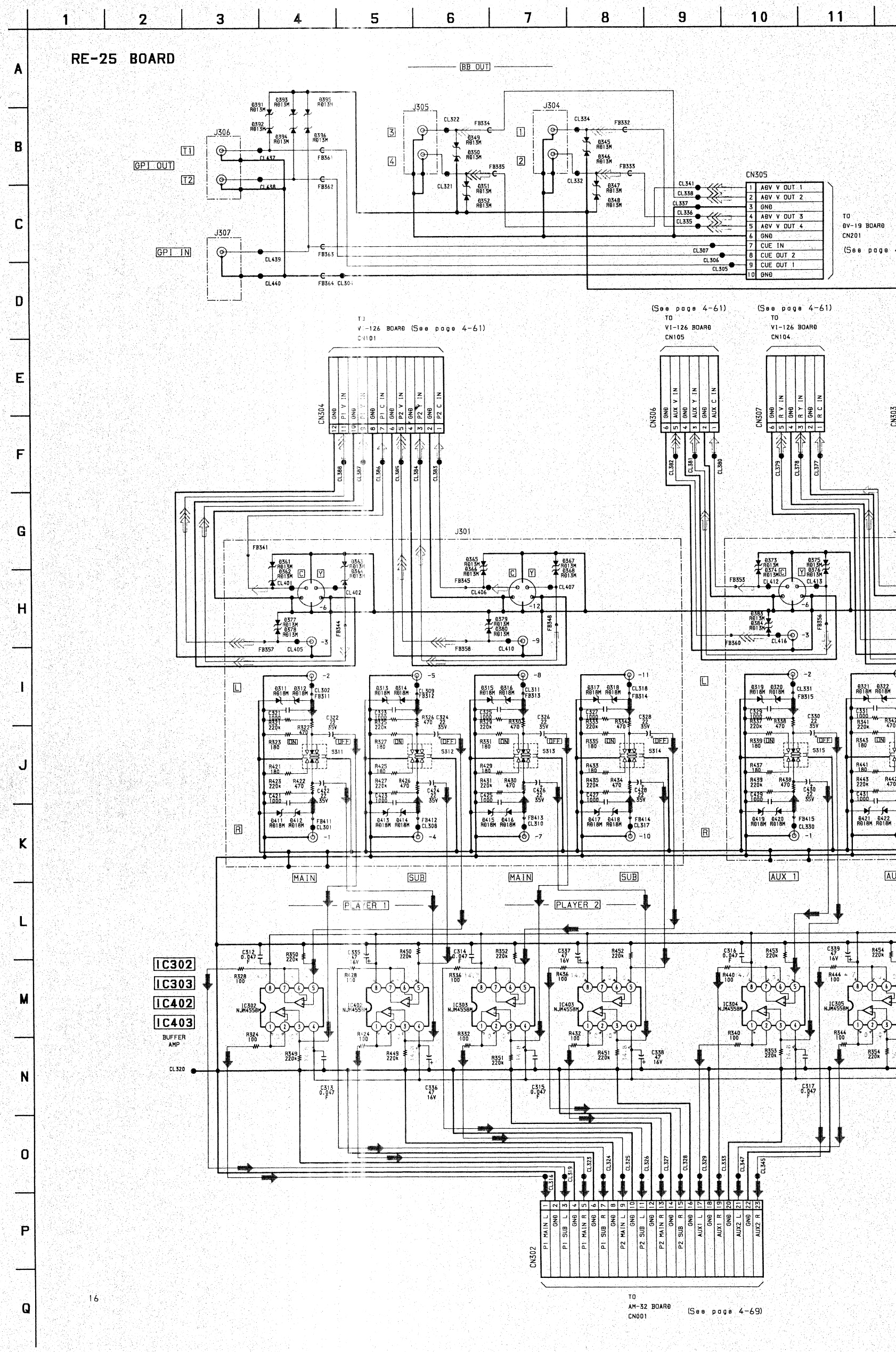
RE-25 BOARD

CN301	J-11	D371	D-7
CN302	I-1	D372	D-7
CN303	I-13	D373	D-5
CN304	G-1	D374	D-5
CN305	G-13	D375	D-5
CN306	F-5	D376	D-5
CN307	F-6	D377	D-1
		D378	D-1
D301	C-8	D379	D-3
D302	B-8	D380	D-3
D303	C-9	D381	D-7
D304	B-9	D382	D-7
D305	B-10	D383	D-5
D306	B-9	D384	D-5
D311	C-1	D391	D-12
D312	C-1	D392	D-12
D313	B-2	D393	D-12
D314	B-2	D394	D-12
D315	C-3	D395	B-12
D316	C-3	D396	B-12
D317	B-4	D401	B-8
D318	B-4	D402	B-7
D319	B-5	D403	B-8
D320	B-5	D404	B-8
D321	B-6	D405	B-9
D322	B-6	D406	B-10
D323	B-7	D411	A-1
D324	B-7	D412	A-1
D331	D-8	D413	A-2
D332	D-8	D414	A-2
D333	D-7	D415	A-3
D334	D-8	D416	A-3
D335	D-9	D417	A-4
D336	D-9	D418	A-4
D337	D-8	D419	A-5
D338	D-8	D420	A-5
D339	D-8	D421	A-6
D340	D-9	D422	A-6
D341	D-9	D423	A-7
D342	D-9	D424	A-6
D343	D-10		
D344	D-9	IC301	I-10
D345	E-11	IC302	C-1
D346	E-11	IC303	H-3
D347	D-10	IC304	H-4
D348	D-10	IC305	H-5
D349	E-12	IC306	H-6
D350	E-12	IC401	I-10
D351	D-12	IC402	H-2
D352	D-12	IC403	H-4
D361	D-1		
D362	D-1	Q301	C-11
D363	D-2	Q302	C-11
D364	D-2	Q303	C-12
D365	D-3	Q304	C-11
D366	D-3	Q401	B-11
D367	D-3	Q402	B-11
D368	D-3	Q403	B-12
D369	D-7	Q404	B-11
D370	D-7		



RE-25 (VIDEO,AUDIO INPUT/OUTPUT) SCHEMATIC DIAGRAM

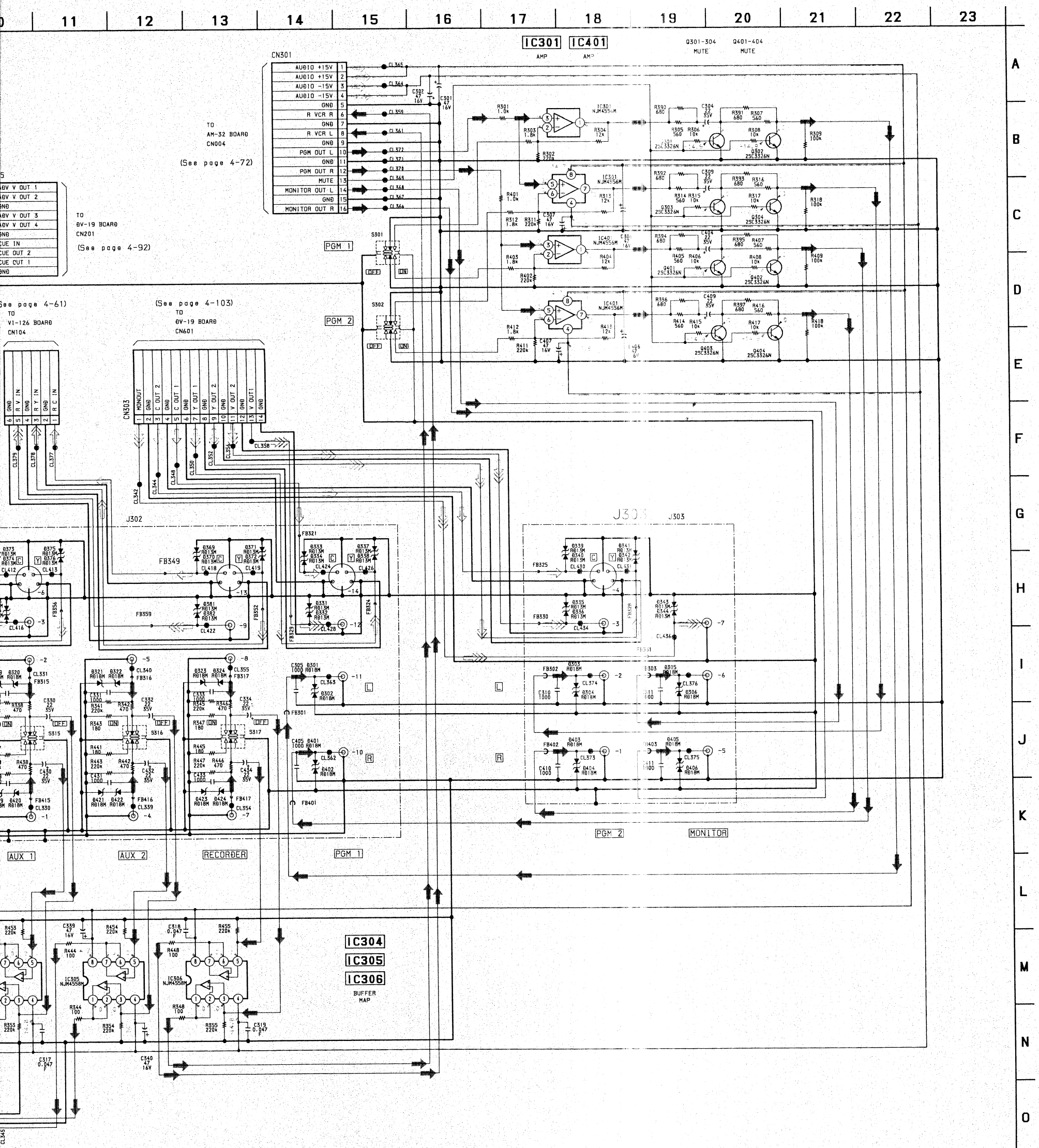
– Ref No. RE-25 BOARD : 3,000 Seriese –



16

• **SIGNAL PATH (ANALOG)**

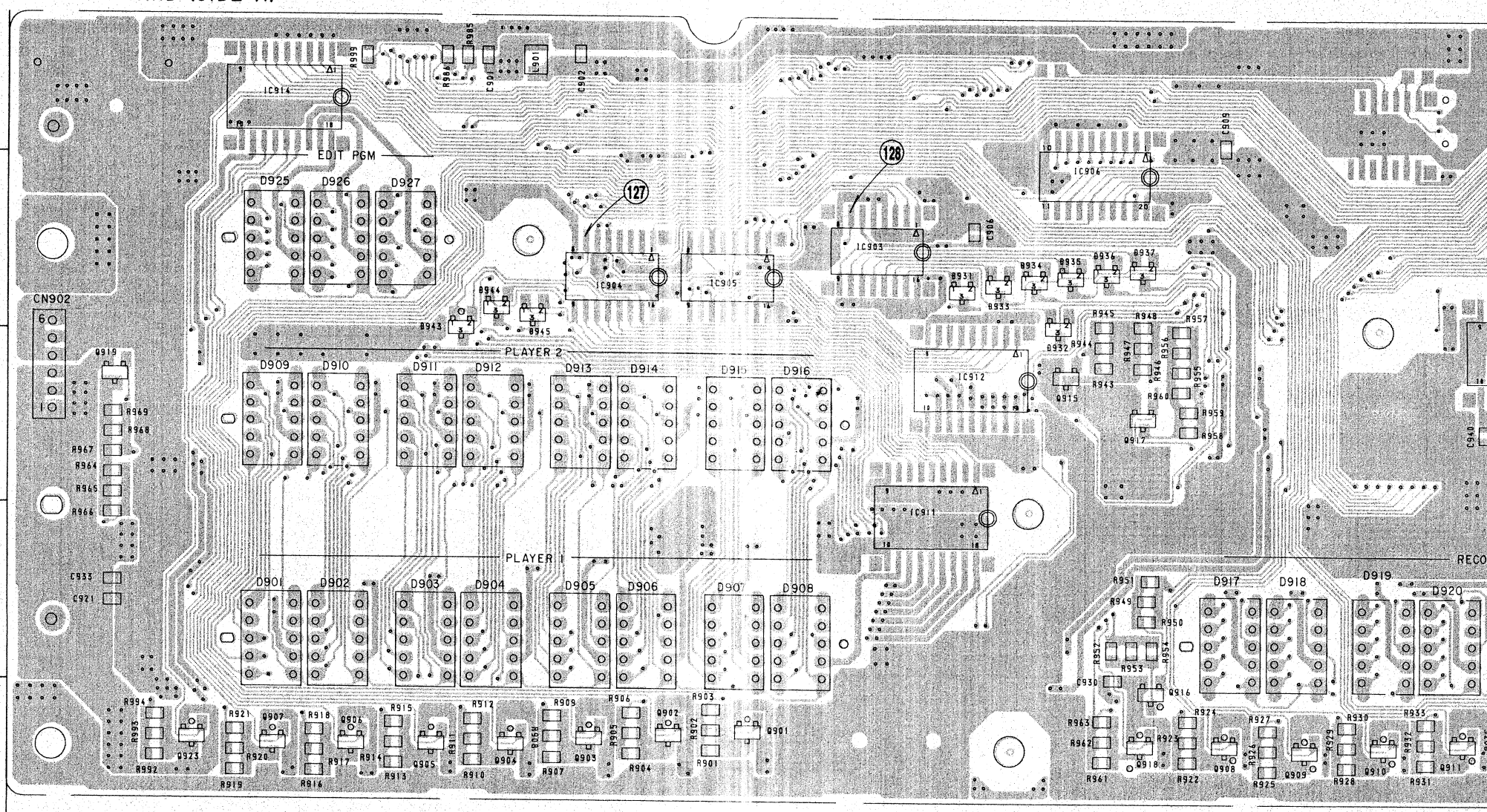
VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
⇨	⇨	⇨	➡


IC301 IC401
AMP
Q301-304 MUTE
Q401-404 MUTE
CN301
AUDIO +15V
AUDIO +15V
AUDIO -15V
AUDIO -15V
GND
R VCR R
GND
R VCR L
GND
PGM OUT L
GND
PGM OUT R
MUTE
MONITOR OUT L
GND
MONITOR OUT R
TO AM-32 BOARD CN004
(See page 4-72)
TO 8V-19 BOARD CN201
(See page 4-92)
(See page 4-61)
TO V1-126 BOARD CN104
(See page 4-103)
TO 8V-19 BOARD CN601
CN303
MONOUT
C OUT 2
C OUT 1
Y OUT 1
Y OUT 2
V OUT 2
V OUT1
R C IN
R Y IN
J302
J303
FB321
FB349
FB359
FB325
FB330
S301
S302
S315
S316
S317
PGM 1
PGM 2
AUX 1
AUX 2
RECORDER
MONITOR
IC304
IC305
IC306
BUFFER MAP

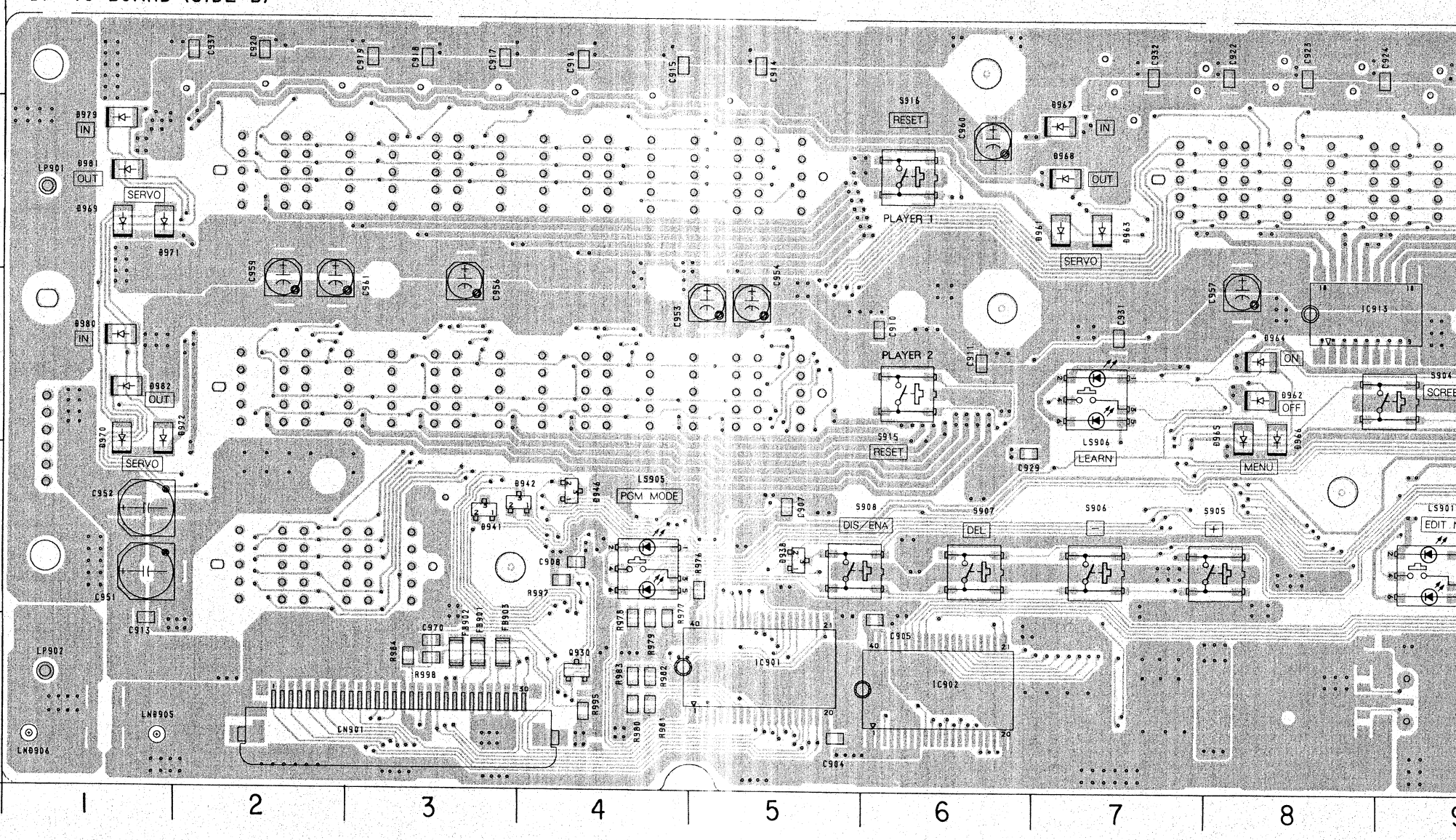
DP-46 (DISPLAY) PRINTED WIRING BOARD

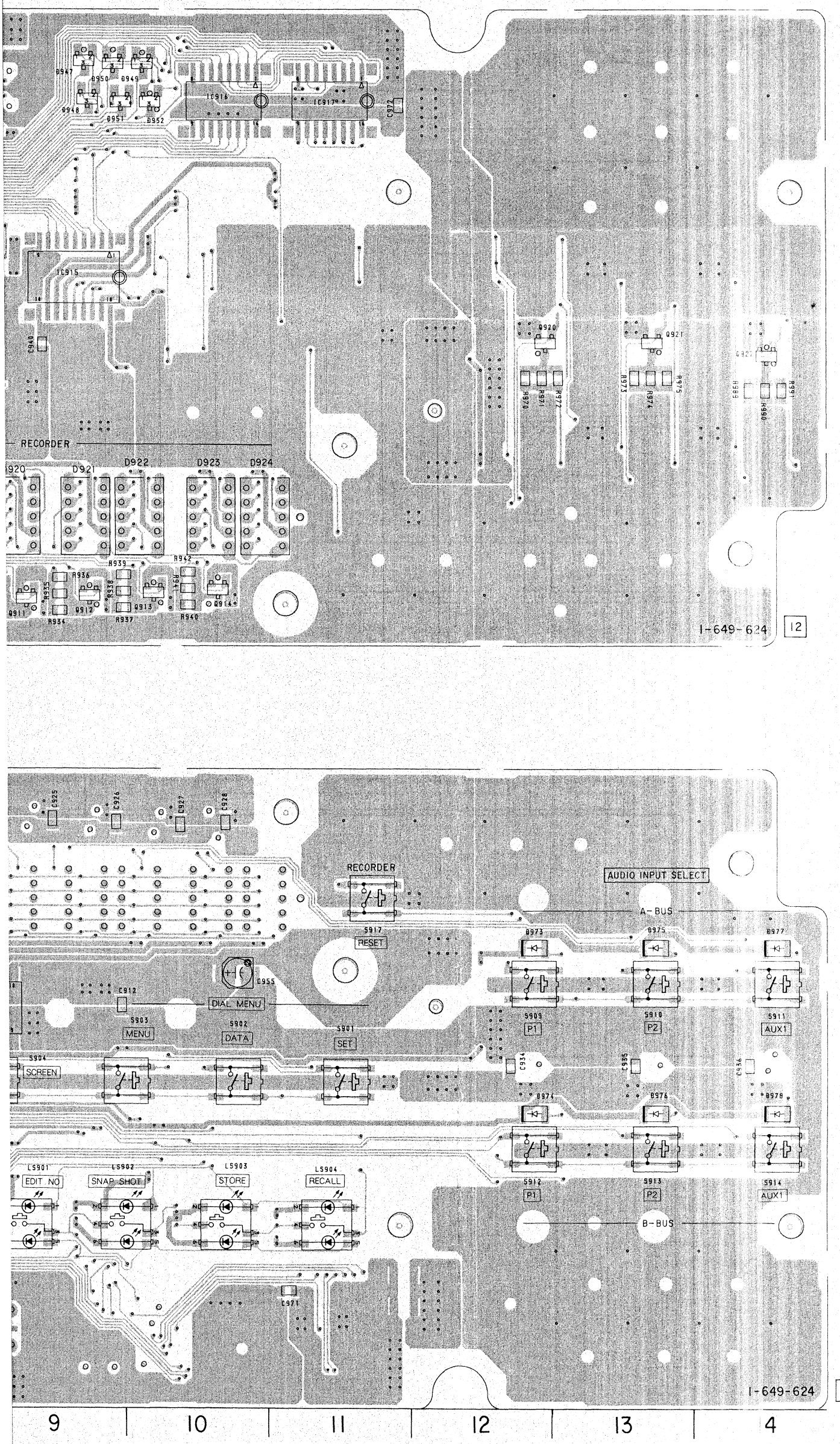
– Ref No. DP-46 BOARD : 2,000 Seriese –

DP-46 BOARD (SIDE A)



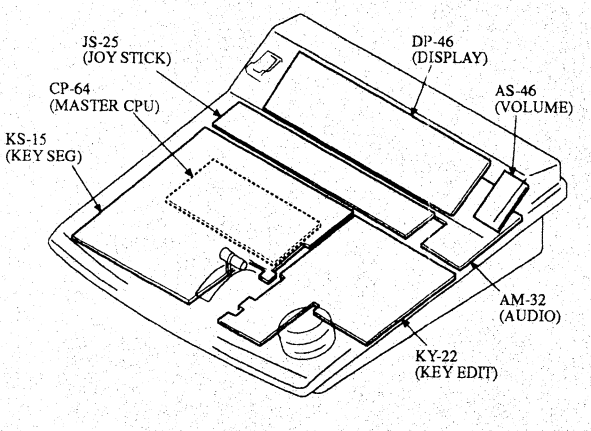
DP-46 BOARD (SIDE B)





DP-46 BOARD

CN901	J-3	D967	G-7
CN902	B-1	D968	G-7
		D969	G-1
D901	D-2	D970	H-1
D902	D-2	D971	G-1
D903	D-3	D972	H-1
D904	D-3	D973	G-12
D905	D-4	D974	H-12
D906	D-4	D975	G-13
D907	D-5	D976	H-13
D908	D-5	D977	G-14
D909	C-2	D978	H-14
D910	C-2	D979	G-1
D911	C-3	D980	H-1
D912	C-3	D981	G-1
D913	C-4	D982	H-1
D914	C-4		
D915	C-5	IC901	J-5
D916	C-5	IC902	J-6
D917	D-7	IC903	B-5
D918	D-8	IC904	B-4
D919	D-8	IC905	B-4
D920	D-9	IC906	A-7
D921	D-9	IC911	C-6
D922	D-9	IC912	C-6
D923	D-10	IC913	H-8
D924	D-10	IC914	A-2
D925	B-2	IC915	B-9
D926	B-2	IC916	A-10
D927	B-3	IC917	A-11
D931	B-6		
D932	B-6	Q901	E-5
D933	B-6	Q902	E-4
D934	B-6	Q903	E-4
D935	B-6	Q904	E-3
D936	B-7	Q905	E-3
D937	B-7	Q906	E-2
D938	I-5	Q907	E-2
D941	I-3	Q908	E-7
D942	I-3	Q909	E-8
D943	B-3	Q910	E-8
D944	B-3	Q911	E-9
D945	B-3	Q912	E-9
D946	I-4	Q913	E-10
D947	A-9	Q914	E-10
D948	A-9	Q915	C-6
D949	A-9	Q916	E-7
D950	A-9	Q917	C-7
D951	A-9	Q918	E-7
D952	A-10	Q919	C-1
D961	G-7	Q920	C-12
D962	H-8	Q921	C-13
D963	G-7	Q922	C-14
D964	H-8	Q923	E-2
D965	H-8	Q930	J-4
D966	H-8		

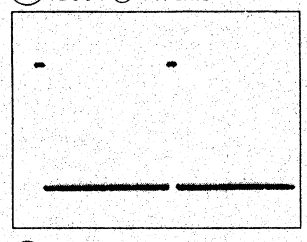


DP-46 (DISPLAY) SCHEMATIC DIAGRAM

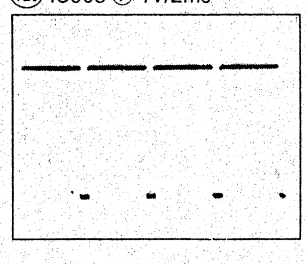
– Ref No. DP-46 BOARD : 2,000 Seriese –

DP-46 board

(127) IC904 ⑦ 1V/2ms



(128) IC903 ⑦ 1V/2ms

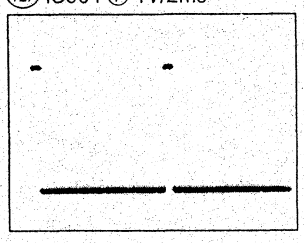


DP-46 (DISPLAY) SCHEMATIC DIAGRAM

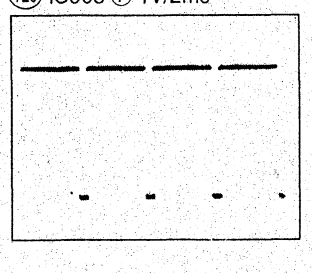
– Ref No. DP-46 BOARD : 2,000 Seriese –

DP-46 board

(127) IC904 ⑦ 1V/2ms



(128) IC903 ⑦ 1V/2ms



IC905 | IC916 | IC917

RESS DECODER

IC911 | IC912 | IC913

IC914 DRIVER

Q901-907

SEGMENT DRIVER

Q908-914

SEGMENT DRIVER

Q915-923

LED SWITCH

EDIT PGM

IC903 | IC904 | IC905 | IC916 | IC917

ADDRESS DECODER

IC911 | IC912 | IC913 | IC914

DRIVER

IC906

BUFFER

IC906 SN74HC541ANS

EDIT PGM

Q915-923 LED SWITCH

17 | 18 | 19 | 20 | 21 | 22

C951 C952
100 100
6.3V 6.3V

C921
0.1 F

CN902 6P

1	LED VCC
2	LED VCC
3	LED VCC
4	LED GND
5	LED GND
6	LED GND

TO
FU-123 BOARD
CN606

(See page 4-114)

LND906

Q901-907
SEGMENT
DRIVER

D907
LA-301VL

D908
LA-301VL

D915
LA-301VL

D916
LA-301VL

PLAYER 1

PLAYER 2

Q908-914
SEGMENT
DRIVER

D923
LA-301VL

D924
LA-301VL

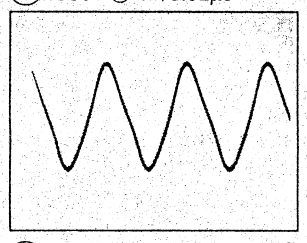
RECORDER

CP-64 (MASTER CPU) SCHEMATIC DIAGRAM

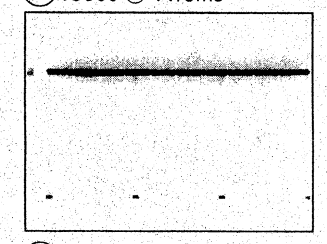
– Ref No. CP-64 BOARD : 2,000 Seriese –

CP-64 board

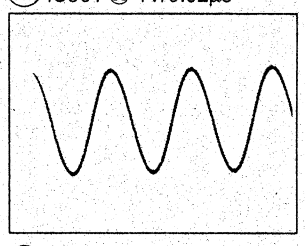
(110) IC501 ㉞ 1V/0.02µs



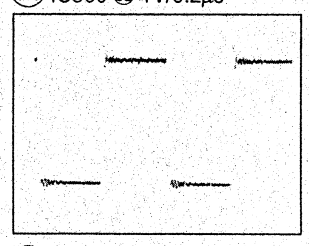
(116) IC500 ㊸ 1V/5ms



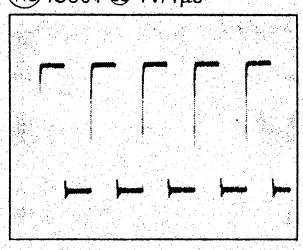
(111) IC501 ㉟ 1V/0.02µs



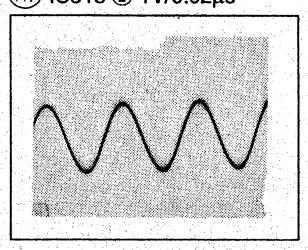
(116) IC500 ㊸ 1V/0.2µs



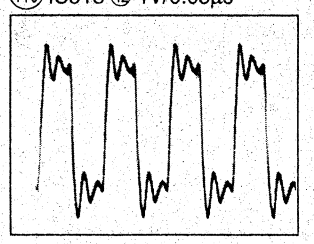
(112) IC501 ㊴ 1V/1µs



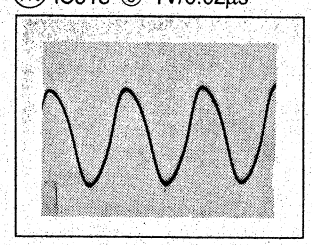
(117) IC518 ② 1V/0.02µs



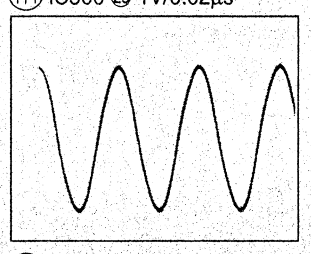
(113) IC518 ㊷ 1V/0.05µs



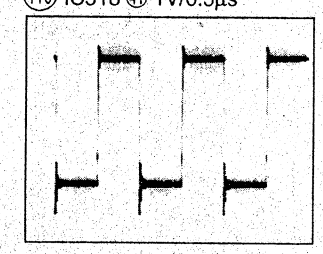
(118) IC518 ③ 1V/0.02µs



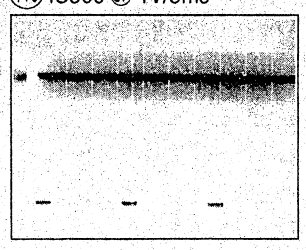
(114) IC500 ㉙ 1V/0.02µs



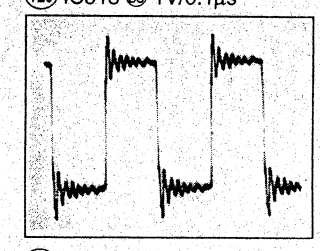
(119) IC518 ㊶ 1V/0.5µs



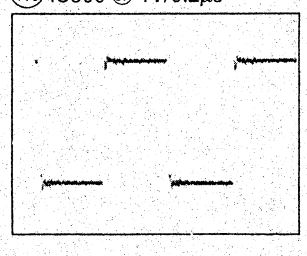
(115) IC500 ㊼ 1V/5ms



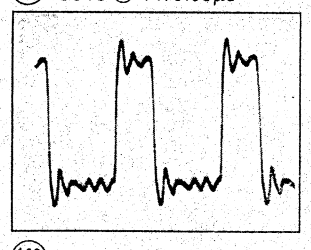
(120) IC518 ㊴ 1V/0.1µs



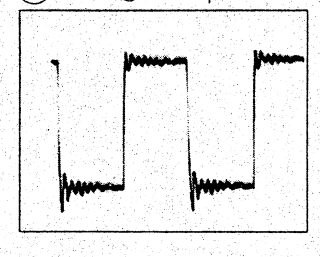
(115) IC500 ㊼ 1V/0.2µs



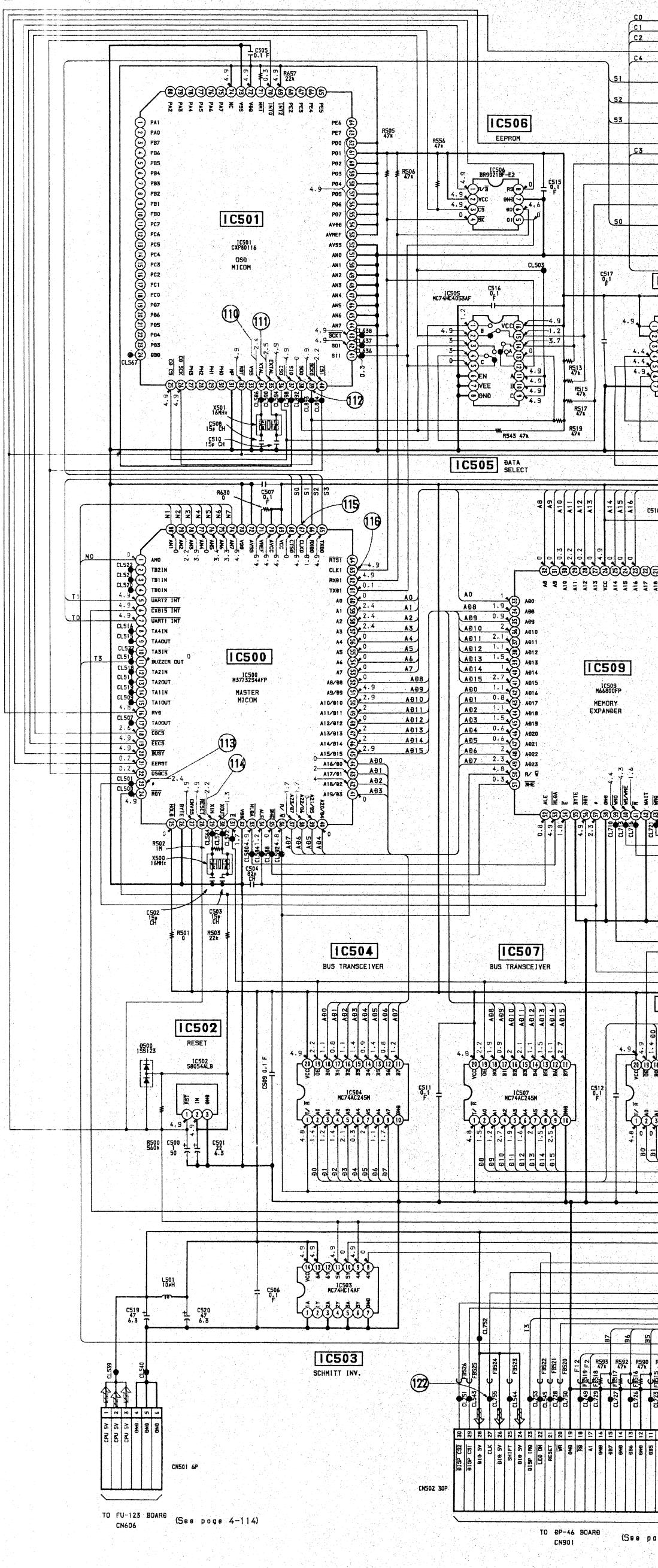
(121) IC518 ㊺ 1V/0.05µs



(122) IC518 ㊹ 1V/0.1µs



CP-64 BOARD



CN500 21P

1	CUE IN	
2	CUE OUT2	
3	CUE OUT1	
4	RESET	
5	MASTER CS	
6	GND	
7	SCK	
8	GND	
9	DATA TO MASTER	
10	GND	
11	DATA FROM MASTER	
12	GND	
13	RVB	
14	R E/O	
15	CO SCK	
16	GND	
17	CO CS	
18	GND	
19	CO DATA	
20	GND	
21	READY	

TO 8V-19 BOARD CN701

(See page 4-111)

IC508 AND GATE

IC521 IC522 IC523 IC524 GATE

Q501 POWER SWITCH

Q500 POWER FAIL DETECT

IC600 UART

IC601 UART SELECT

IC602 UART

IC513 RAM

IC510 ROM

IC517 ADDRESS DECODER

IC516 OR/GATE

IC515 DELAY

IC518 CPU/PTC/PIU/ICU

IC519 IC520 BUS TRANSCEIVER

IC512 RAM

IC511 CHIP SELECT

IC514 INV.

Q503 Q502 BUZZER SWITCH

CN503 28P

TO KS-15 BOARD CN102 (See page 4-73)

CN504 28P

TO KS-15 BOARD CN101 (See page 4-73)

(See page 4-13)

CN500 21P

1	CUE IN
2	CUE OUT2
3	CUE OUT1
4	RESET
5	MASTER CS
6	GND
7	SCK
8	GND
9	DATA TO MASTER
10	GND
11	DATA FROM MASTER
12	GND
13	RVD
14	R E/O
15	CO SCK
16	GND
17	CO CS
18	GND
19	CO DATA
20	GND
21	READY

TO
8V-19 BOARD
CN701

(See page 4-111)

IC508 AND GATE

IC521
IC522
IC523
IC524
GATE

Q501
POWER
SWITCH

Q500
POWER
FAIL
DETECT

IC509
M66800FP
MEMORY
EXPANDER

IC510
MSM27C102K-12
ROM

IC511
CHIP
SELECT

IC512
RAM

IC513
RAM

IC514
INV.

IC515
DELAY

IC516
ADDRESS
DECODER

IC517

IC518
CXB1500Q
CPG/PTC/
PIU/ICU

IC519 IC520
BUS TRANSCEIVER

IC600
UPD72001GC-11
UART

IC601
UART
SELECT

IC602
UPD72001GC-11
UART

Q502
BUZZER
SWITCH

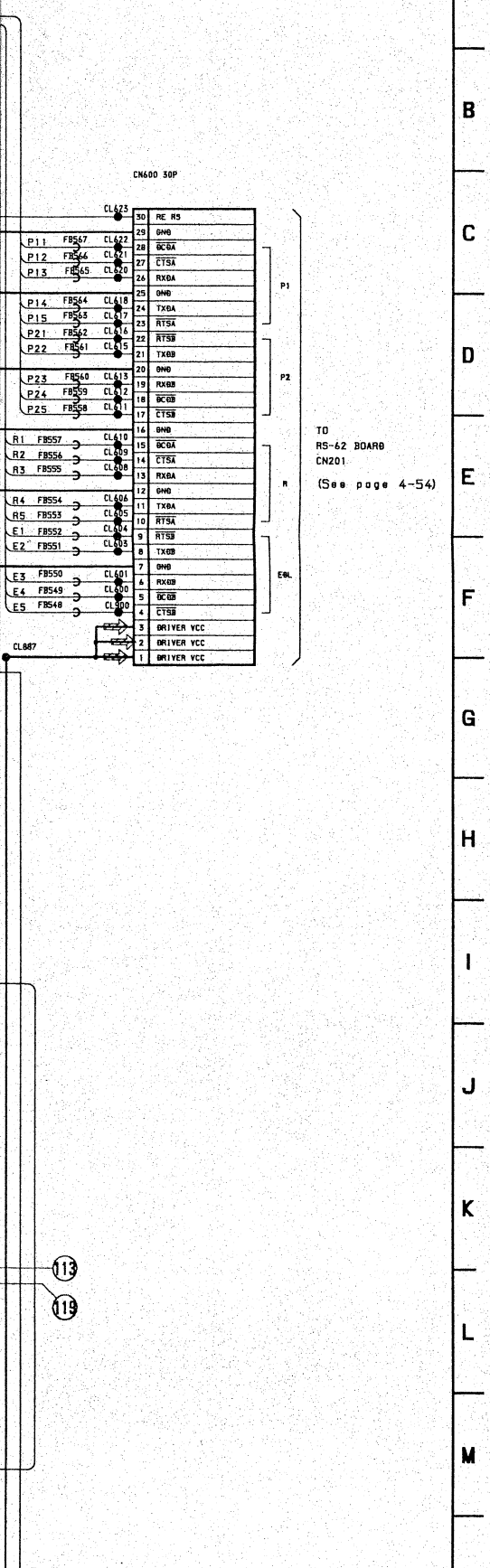
CN503 28P

CN504 28P

TO 8P-46 BOARD
CN901
(See page 4-13)

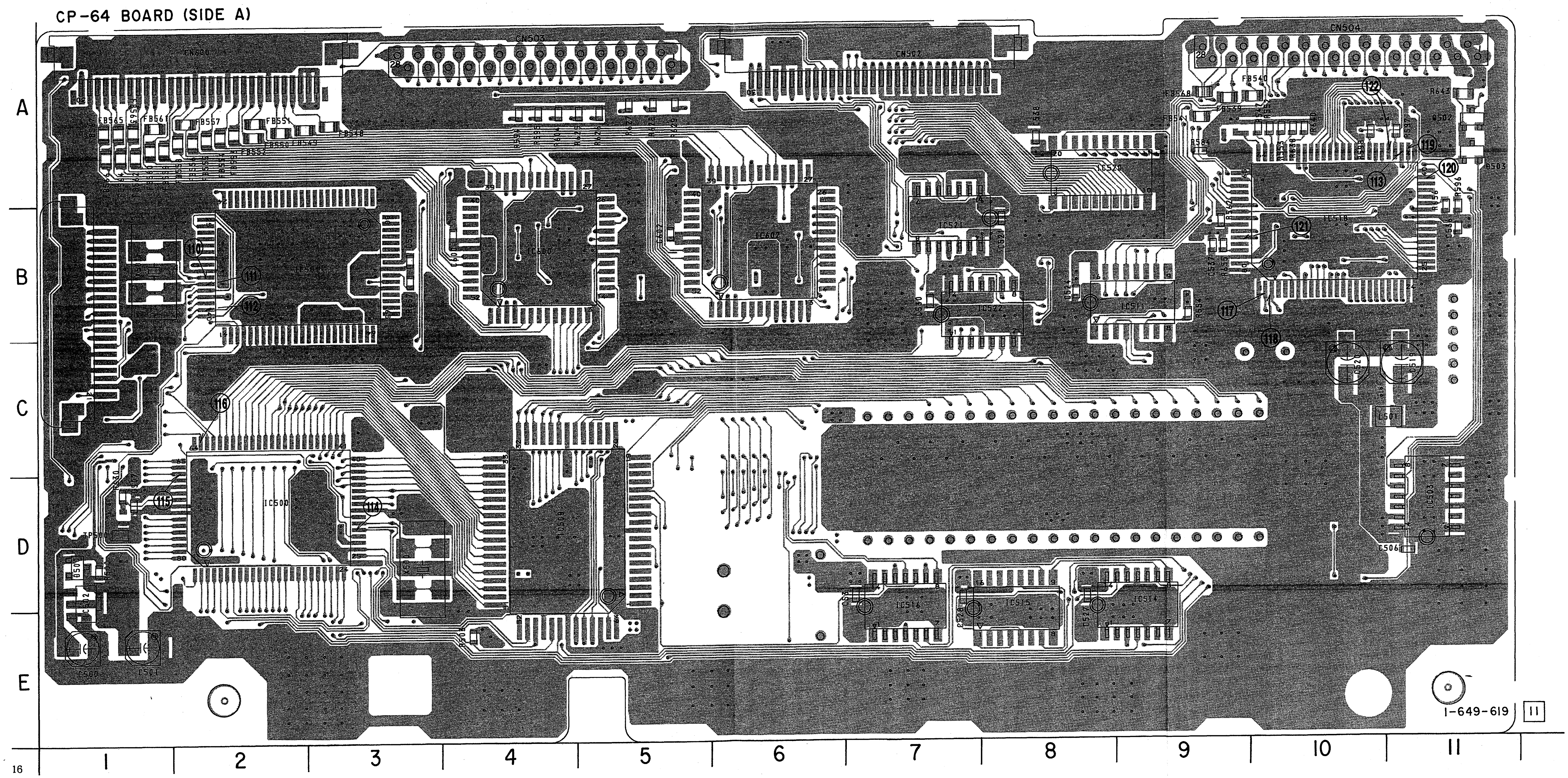
TO KS-15 BOARD
CN102
(See page 4-73)

TO KS-15 BOARD
CN101
(See page 4-73)

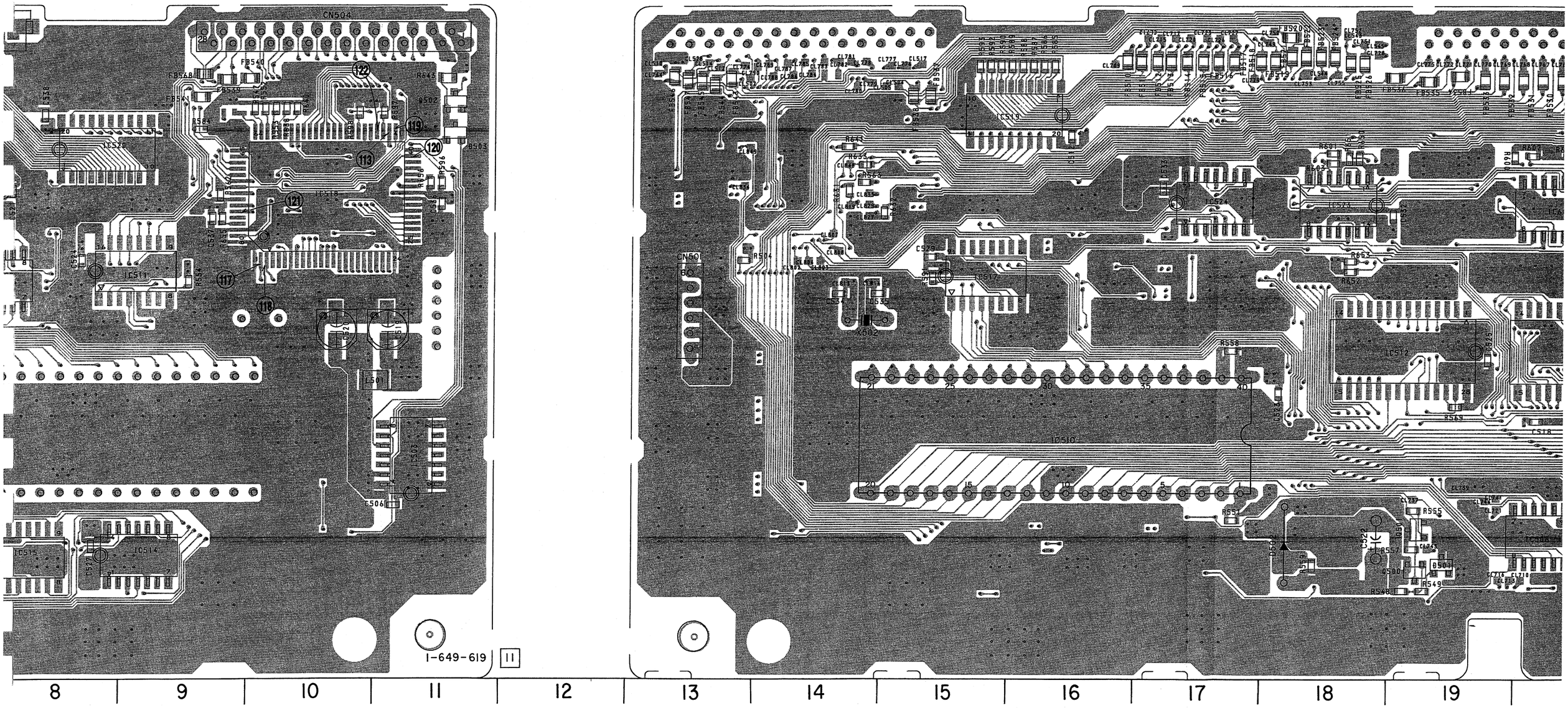

CN600 30P
CL623
30 RE R5
29 GND
28 DCDA
27 CTSA
26 RXDA
25 GND
24 TXDA
23 RTSA
22 RTSB
21 TXDB
20 GND
19 RXDB
18 DCDB
17 CTSB
16 GND
15 DCDA
14 CTSA
13 RXDA
12 GND
11 TXDA
10 RTSA
9 RTSB
8 TXDB
7 GND
6 RXDB
5 DCDB
4 CTSB
3 DRIVER VCC
2 DRIVER VCC
1 DRIVER VCC
P1
P2
R
E&L
P11 FB567 CL622
P12 FB566 CL621
P13 FB565 CL620
P14 FB564 CL618
P15 FB563 CL617
P21 FB562 CL614
P22 FB561 CL615
P23 FB560 CL613
P24 FB559 CL612
P25 FB558 CL611
R1 FB557 CL610
R2 FB556 CL609
R3 FB555 CL608
R4 FB554 CL606
R5 FB553 CL605
E1 FB552 CL604
E2 FB551 CL603
E3 FB550 CL601
E4 FB549 CL600
E5 FB548 CL600
CL607
TO
RS-62 BOARD
CN201
(See page 4-54)
113
119

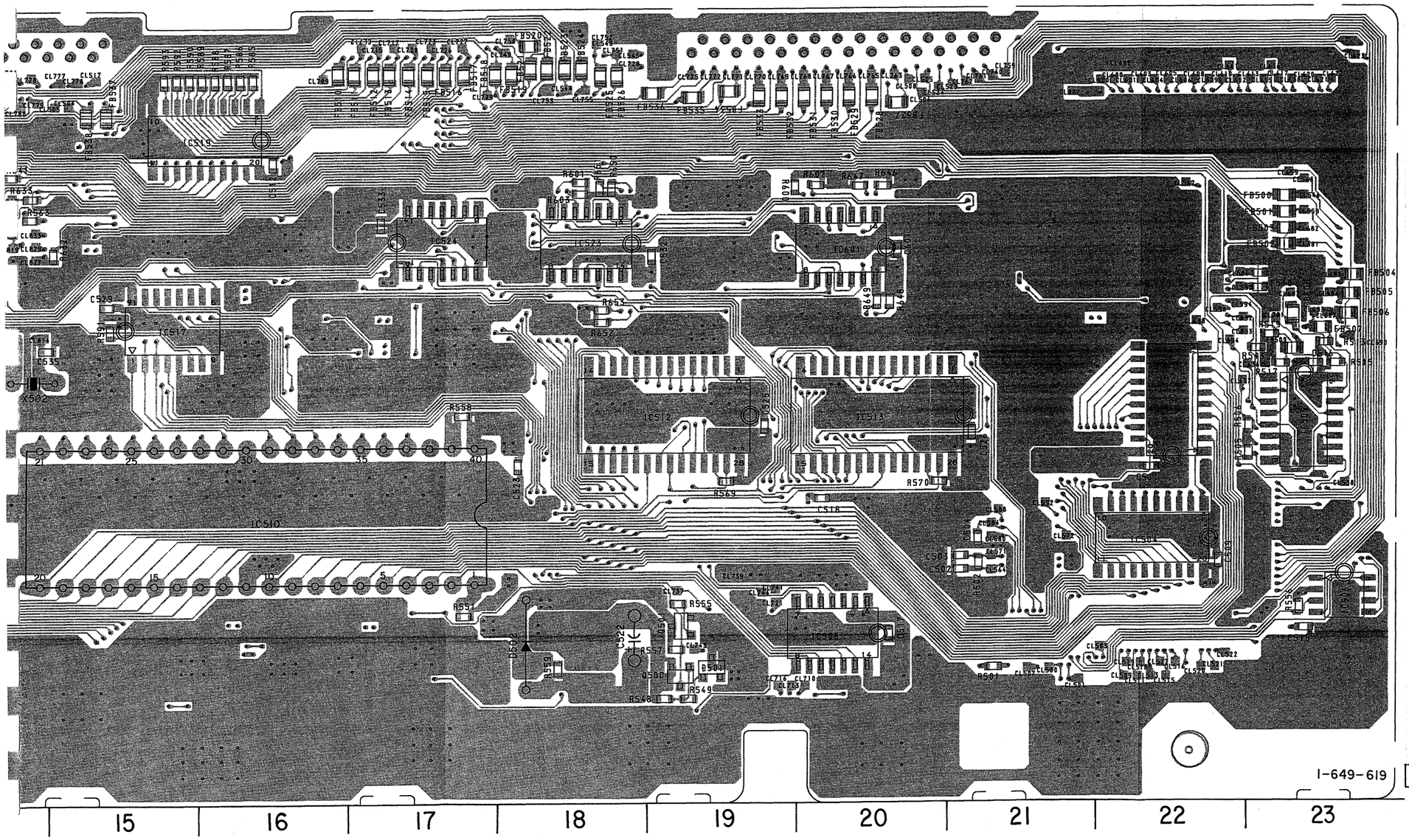
CP-64 (MASTER CPU) PRINTED WIRING BOARD

– Ref No. CP-64 BOARD : 2,000 Seriese –



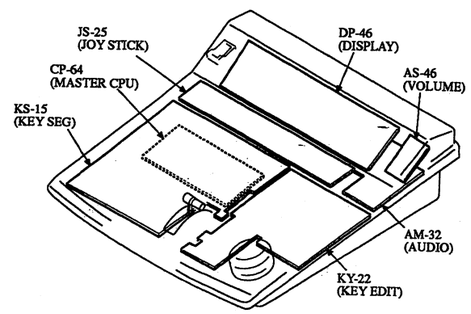
CP-64 BOARD (SIDE B)





CP-64 BOARD

CN500	B-1
CN501	B-13
CN502	A-7
CN503	A-4
CN504	A-10
CN600	A-2
D500	D-1
D501	E-19
D502	D-18
D503	A-11
IC500	D-2
IC501	B-2
IC502	D-1
IC503	D-11
IC504	D-22
IC505	C-23
IC506	D-23
IC507	C-22
IC508	D-20
IC509	D-4
IC510	D-16
IC511	B-9
IC512	C-19
IC513	C-20
IC514	E-9
IC515	E-8
IC516	E-7
IC517	B-15
IC518	B-10
IC519	A-15
IC520	A-8
IC521	B-7
IC522	B-8
IC523	B-18
IC524	B-17
IC600	B-4
IC601	B-20
IC602	B-6
Q500	E-19
Q501	D-19
Q502	A-11

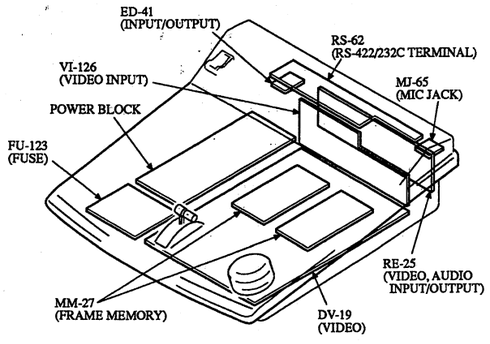


MM-27 (FRAME MEMORY) PRINTED WIRING BOARD

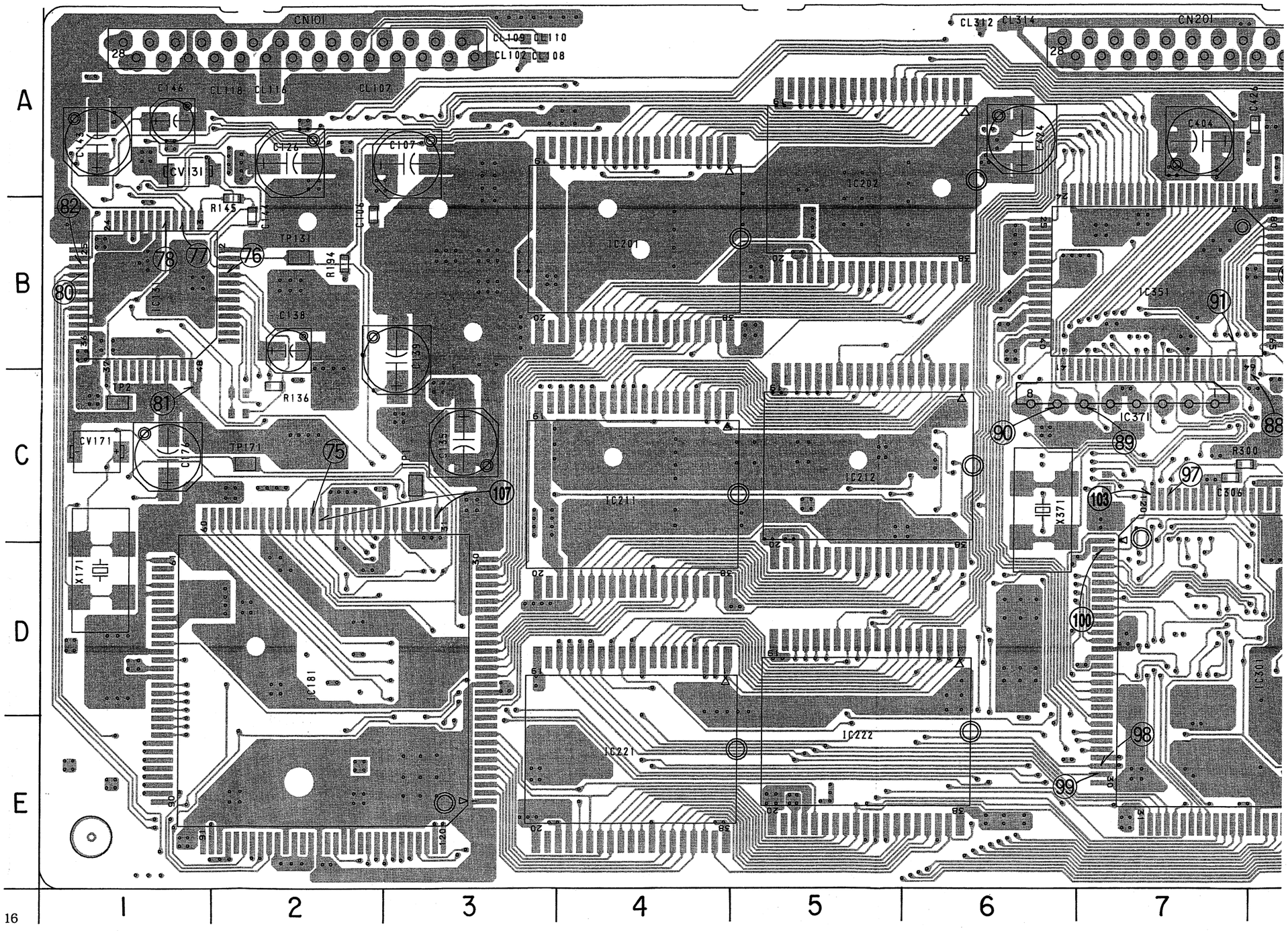
– Ref No. MM-27 BOARD : 5,000 Seriese –

MM-27 BOARD

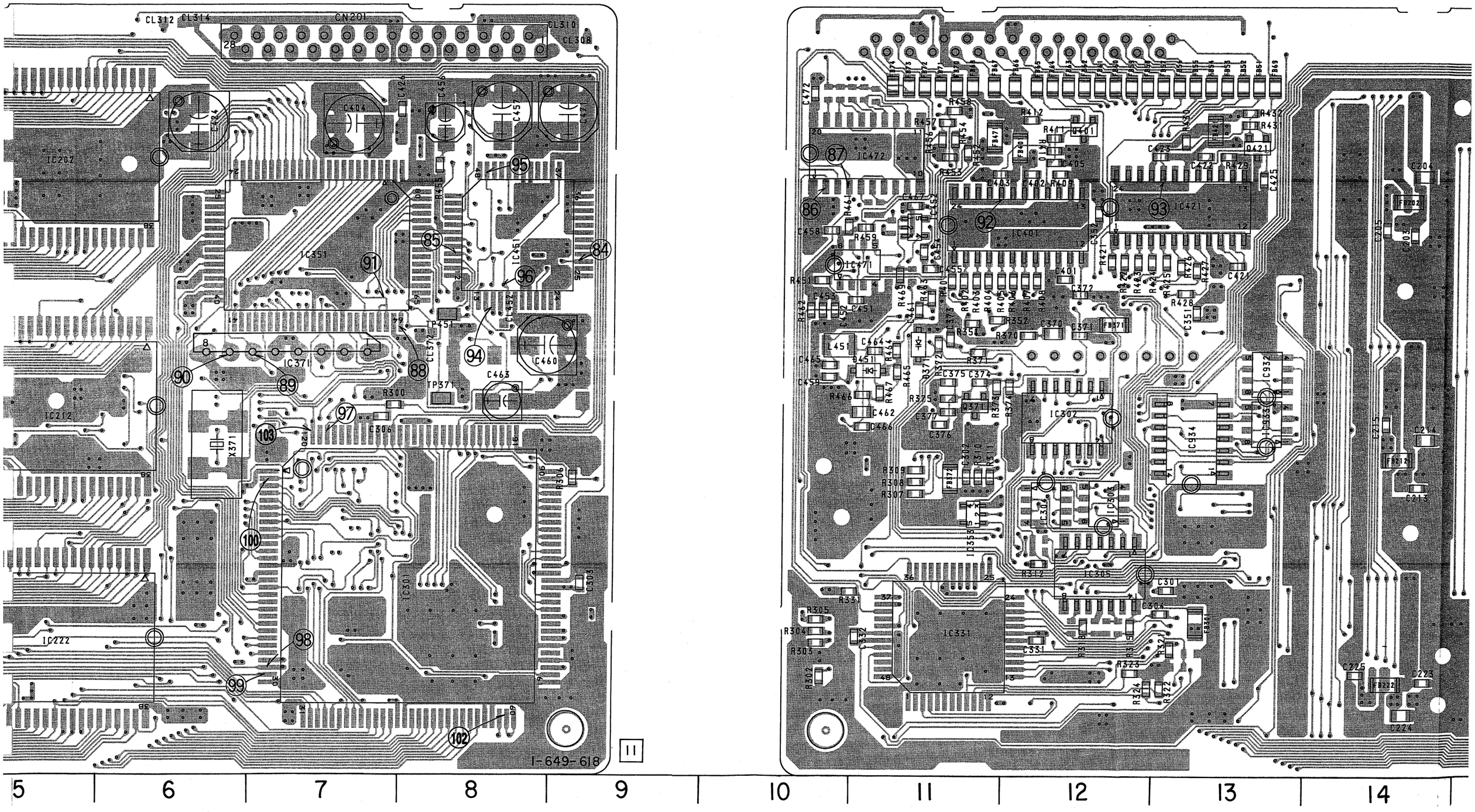
CN101	A-2
CN201	A-7
D131	A-18
D171	C-18
D181	E-16
D371	C-11
D451	C-11
IC101	B-16
IC121	B-17
IC131	B-11
IC132	C-16
IC151	C-17
IC152	D-17
IC153	D-17
IC154	E-17
IC181	D-2
IC201	B-4
IC202	A-5
IC211	C-4
IC212	C-5
IC221	E-4
IC222	E-5
IC301	D-8
IC302	C-12
IC303	D-12
IC304	D-12
IC305	D-12
IC331	E-11
IC351	B-7
IC353	D-11
IC371	C-7
IC401	B-12
IC421	B-13
IC451	B-8
IC452	B-11
IC471	B-11
IC472	A-11
IC932	C-13
IC933	C-13
IC934	C-13
Q101	A-16
Q131	B-18
Q171	C-18
Q371	C-11
Q401	A-12
Q421	A-13



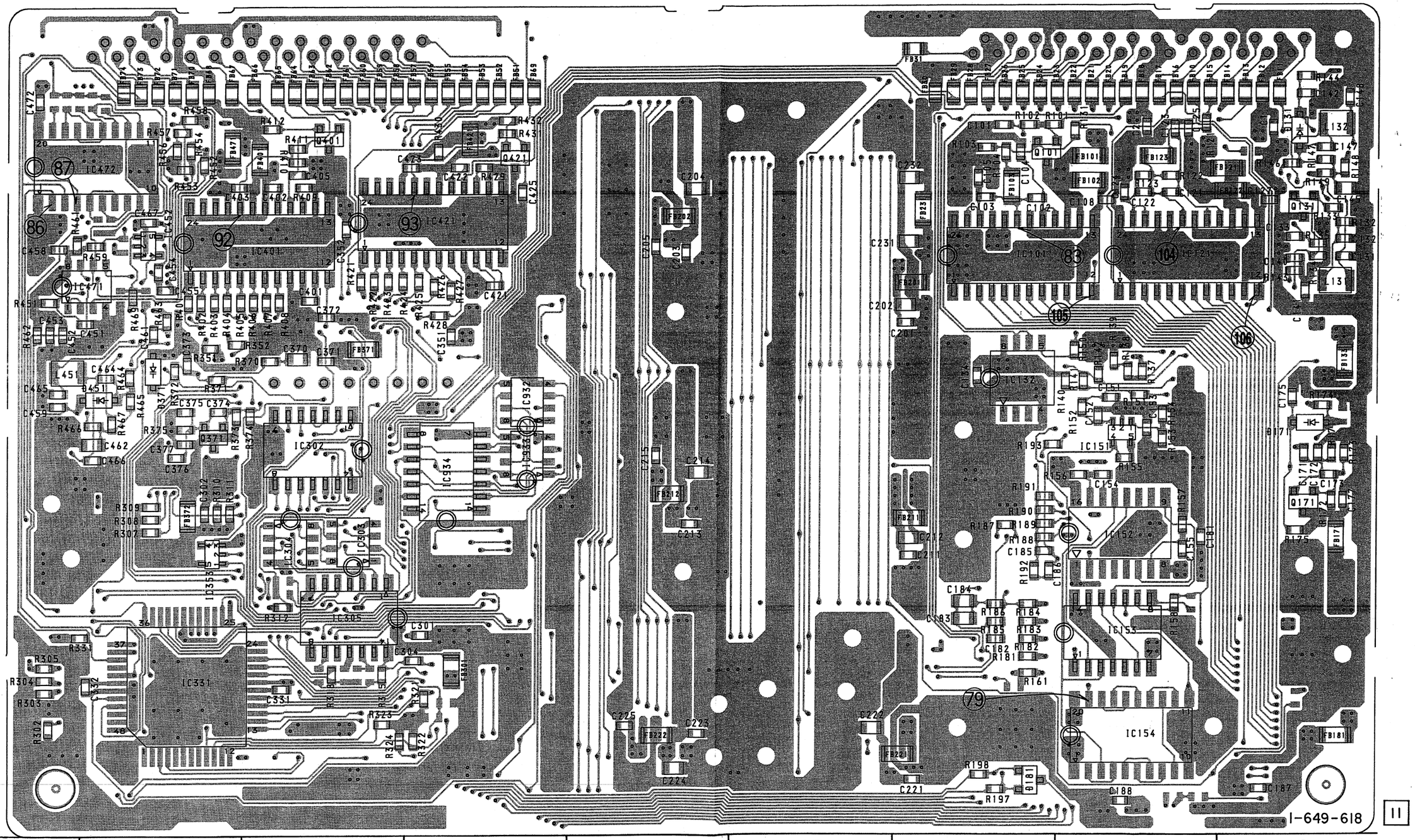
MM-27 BOARD (SIDE A)



MM-27 BOARD (SIDE B)

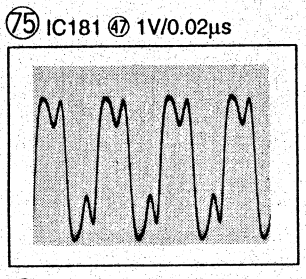


MM-27 BOARD (SIDE B)

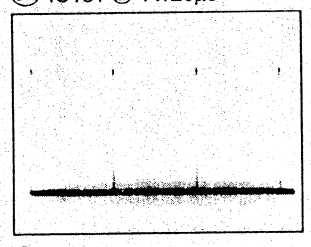


MM-27 board

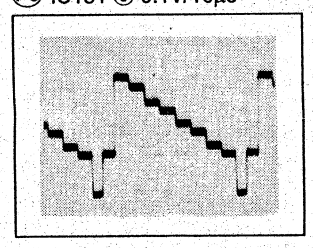
(75) IC181 (47) 1V/0.02µs



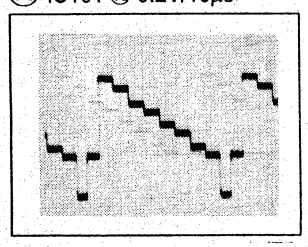
(82) IC131 (27) 1V/20µs



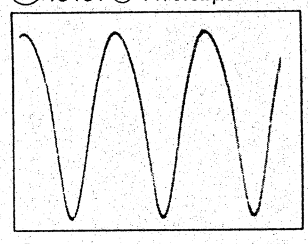
(76) IC131 (9) 0.1V/10µs



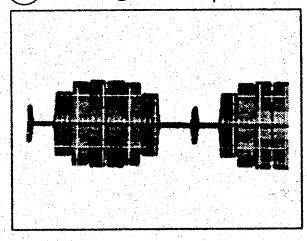
(83) IC101 (19) 0.2V/10µs



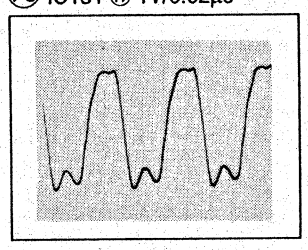
(77) IC131 (15) 1V/0.02µs



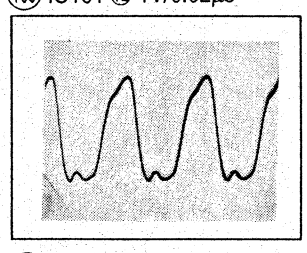
(104) IC121 (19) 0.5V/10µs



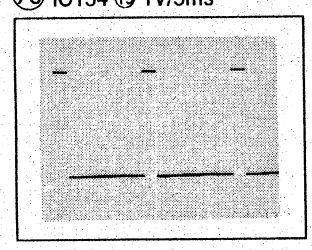
(78) IC131 (17) 1V/0.02µs



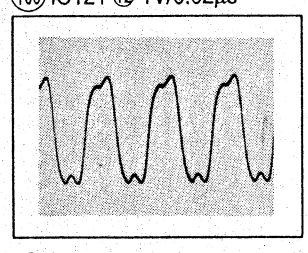
(105) IC101 (12) 1V/0.02µs



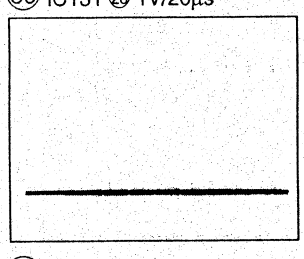
(79) IC154 (19) 1V/5ms



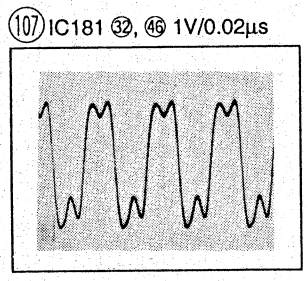
(106) IC121 (12) 1V/0.02µs



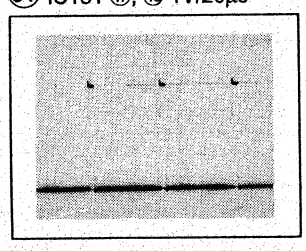
(80) IC131 (28) 1V/20µs



(107) IC181 (32), (46) 1V/0.02µs



(81) IC131 (47), (48) 1V/20µs



• **SIGNAL PATH (ANALOG)**

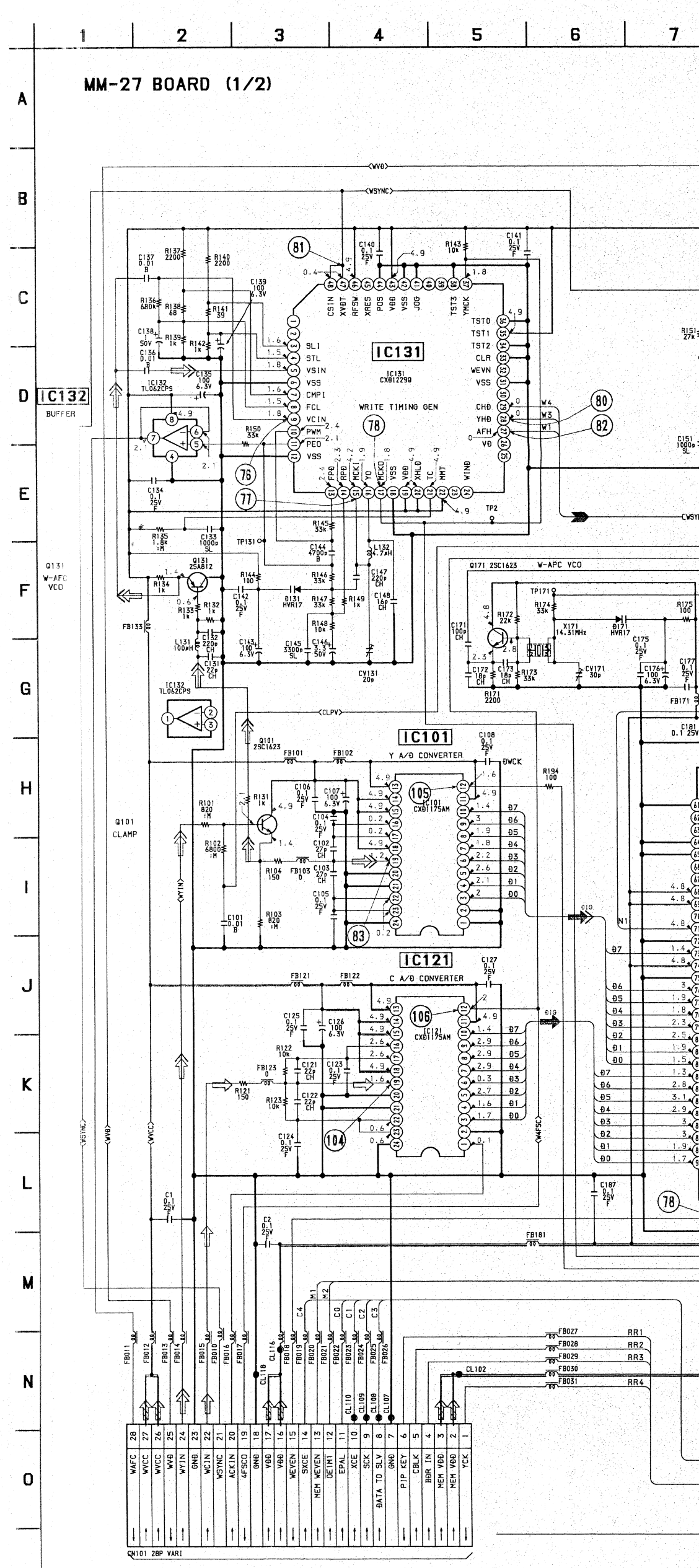
VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
⇨	⇨»		

• **SIGNAL PATH (DIGITAL)**

	VIDEO SIGNAL			VIDEO CONTROLL	AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA		
WRITE	DIG ➡	DIG ➡»		⇨	
READ	DIG ⇨	DIG ⇨»		➡	

MM-27 (1/2) (FRAME MEMORY (1/2)) SCHEMATIC DIAGRAM

– Ref No. MM-27 BOARD : 5,000 Seriese –



W-V SYNC SEP.

IC151 CLAMP

IC152 M.M

IC153 LATCH

IC154 LATCH

IC154 TC74HC374AF

IC151 NJM2406F

IC152 SN74LS221NS

IC153 TC74HC74AF

W-V.SYNC SEP

IC181

IC181 CX01226Q

DIGITAL CHROMA DECODER

DIGITAL NOISE REDUCTION

FIELD #1

IC201 CXK1206M RAM

IC211 CXK1206M RAM

IC221 CXK1206M RAM

WRITE PROCESS

FRAME MEMORY

W-V SYNC SEP.

IC151 CLAMP

IC152 M.M

IC153 LATCH

IC154 LATCH

IC154 TC74HC374AF

IC151 NJM2406F

IC152 SN74LS221NS

IC153 TC74HC74AF

W-V.SYNC SEP

IC181

IC181 CX81226Q

DIGITAL CHROMA DECODER

DIGITAL NOISE REDUCTION

WRITE PROCESS

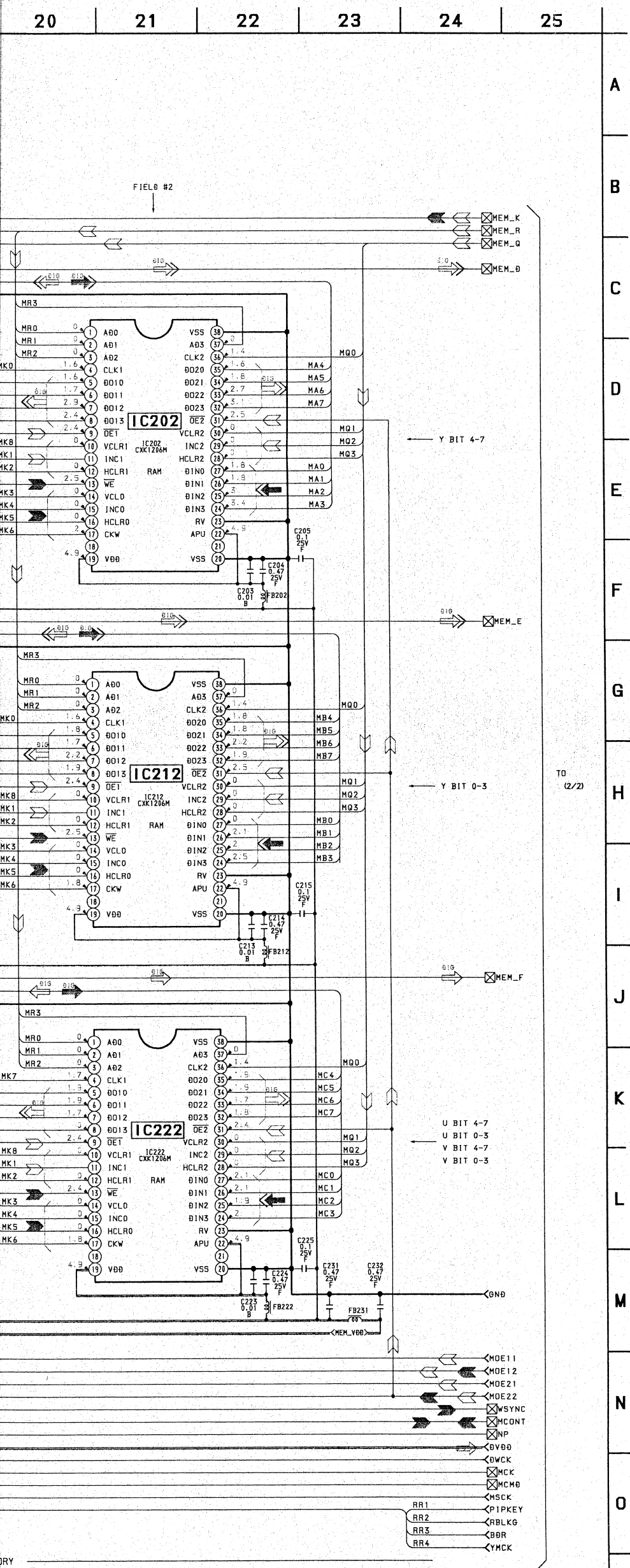
FIELD #1

IC201 CXK1206M RAM

IC211 CXK1206M RAM

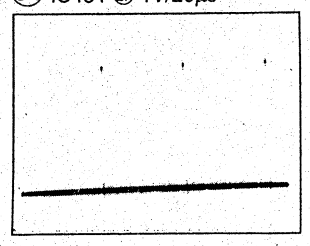
IC221 CXK1206M RAM

FRAME MEMORY

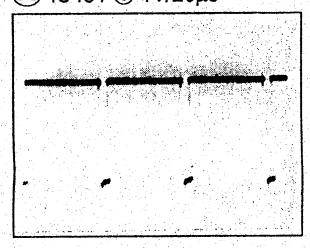


FRAME MEMORY (1/2)

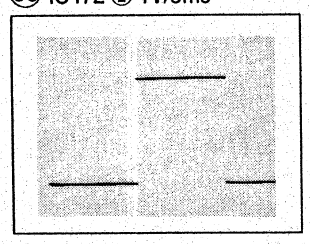
(84) IC451 (27) 1V/20µs



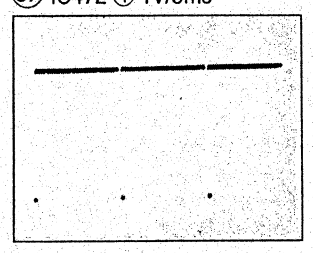
(85) IC451 (9) 1V/20µs



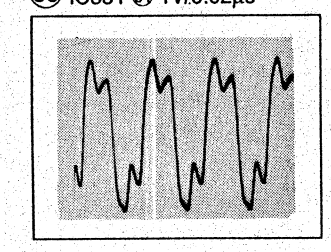
(86) IC472 (2) 1V/5ms



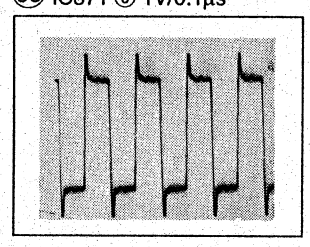
(87) IC472 (4) 1V/5ms



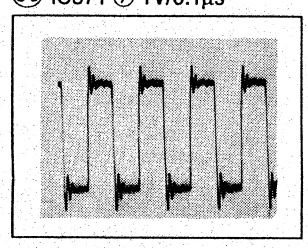
(88) IC351 (64) 1V/0.02µs



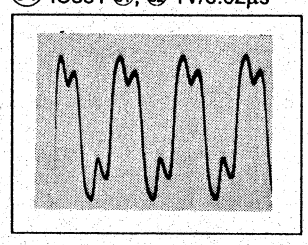
(89) IC371 (6) 1V/0.1µs



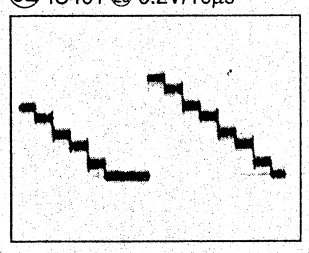
(90) IC371 (7) 1V/0.1µs



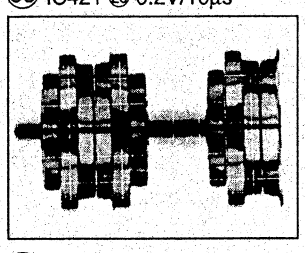
(91) IC351 (61), (62) 1V/0.02µs



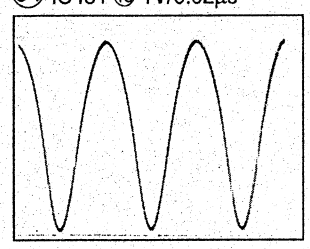
(92) IC401 (20) 0.2V/10µs



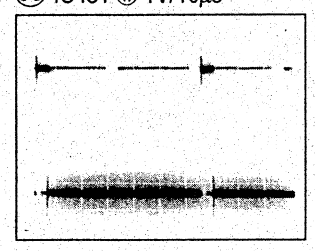
(93) IC421 (20) 0.2V/10µs



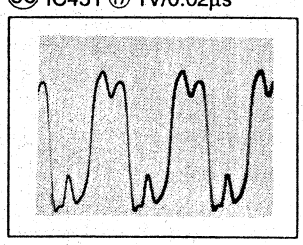
(94) IC451 (15) 1V/0.02µs



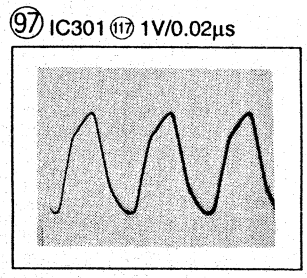
(95) IC451 (47) 1V/10µs



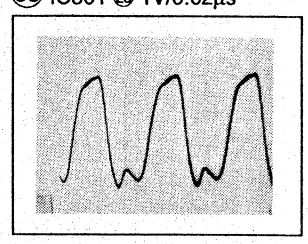
(96) IC451 (17) 1V/0.02µs



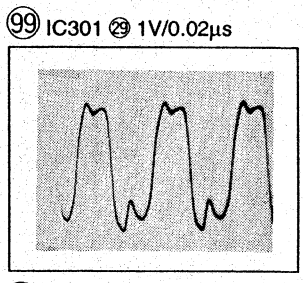
(97) IC301 (117) 1V/0.02µs



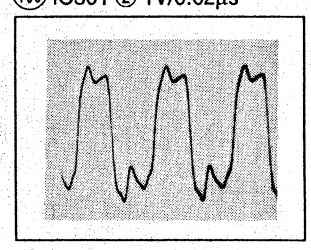
(98) IC301 (28) 1V/0.02µs



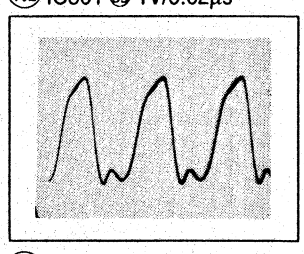
(99) IC301 (29) 1V/0.02µs



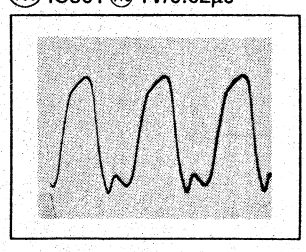
(100) IC301 (2) 1V/0.02µs



(102) IC301 (59) 1V/0.02µs



(103) IC301 (119) 1V/0.02µs



- **SIGNAL PATH (ANALOG)**

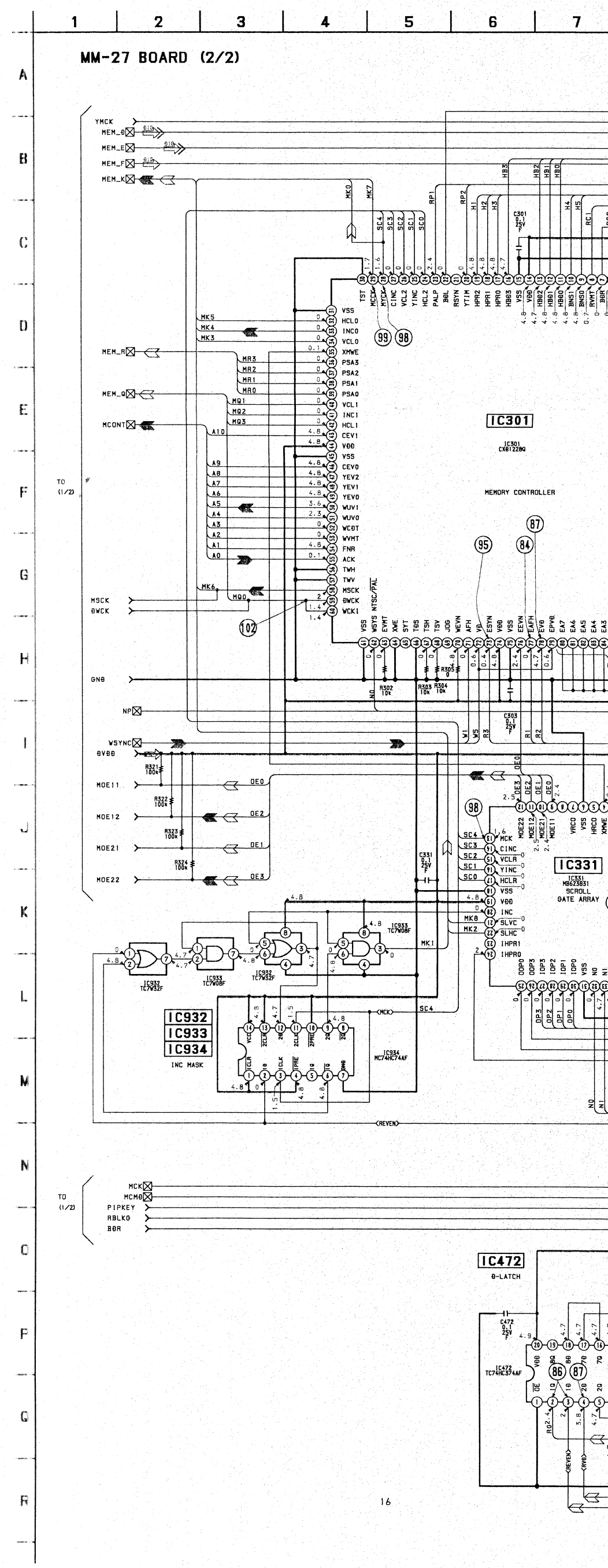
VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
⇨	⇨		

- **SIGNAL PATH (DIGITAL)**

	VIDEO SIGNAL			VIDEO CONTROLL	AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA		
WRITE				⇨	
READ	DIG ⇨	DIG ⇨		▶	

MM-27 (2/2) (FRAME MEMORY (2/2)) SCHEMATIC DIAGRAM • See page 4-26 for P

– Ref. No. MM-27 BOARD : 5,000 Seriese –



7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22

IC351
IC351 CX81227Q
DIGITAL CHROMA ENCORDER
SPECIAL EFFECTS GEN

IC401
Y D/A CONVERTER
IC401 CX81171M

IC421
C D/A CONVERTER
IC421 CX81171M

IC331
IC331 MB623031
SCROLL GATE ARRAY

IC302
IC303
IC304
MUTE/PULSE GEN.

IC305

IC353
GATE

IC371
PHASE COMP.
R-APC VCO

Q371
BUFFER

IC452
BUFFER

IC451
IC451 CX81229Q
READ TIMING GEN

IC471
INV.

TO ØV-19 BOARØ
CN503 (A-LINE)
CN504 (B-LINE)

page 4-26 for PRINTED WIRING BOARD

7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

IC331
M66231931
SCROLL
GATE ARRAY

IC451
CXB1229Q
READ TIMING GEN

IC471
INV.

IC302
IC303
IC304
IC305
MUTE/PULSE GEN.

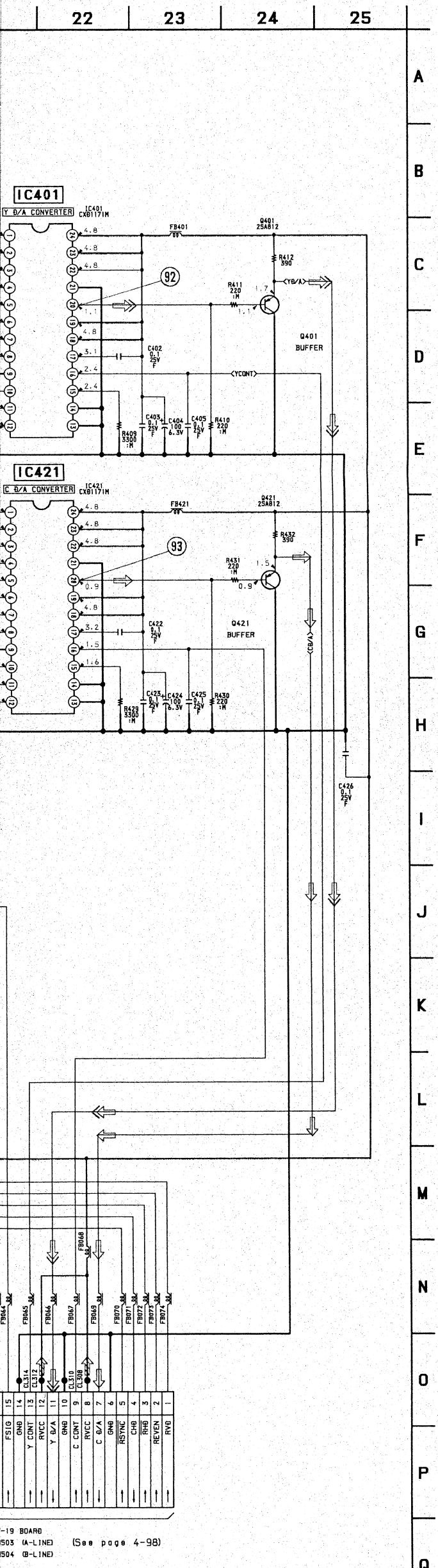
IC351
CXB1227Q
DIGITAL CHROMA ENCORDER
SPECIAL EFFECTS GEN

IC353
GATE

IC371
PHASE COMP.

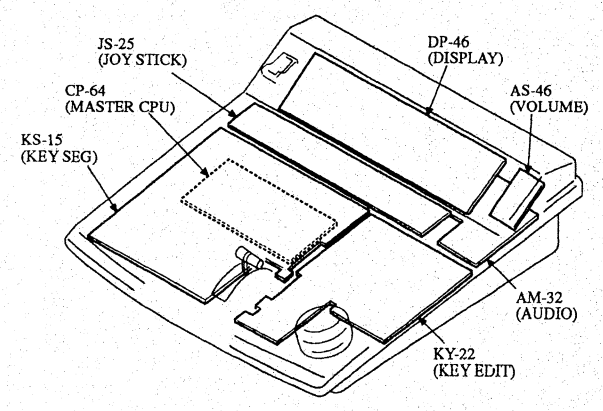
IC452
BUFFER

Q371
BUFFER


22
23
24
25
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
IC401
Y D/A CONVERTER
IC401
CX81171M
FB401
Q401
2SA812
R412
390
92
R411
220
:M
<YB/A>
Q401
BUFFER
C402
0.1
25V
F
<YCONT>
C403
0.1
25V
F
C404
100
6.3V
C405
0.1
25V
F
R410
220
:M
R409
3300
:M
IC421
C D/A CONVERTER
IC421
CX81171M
FB421
Q421
2SA812
R432
390
93
R431
220
:M
Q421
BUFFER
<YDA>
C422
0.1
25V
F
C423
0.1
25V
F
C424
100
6.3V
C425
0.1
25V
F
R430
220
:M
R429
3300
:M
C426
0.1
25V
F
FB068
FB064
FB065
FB066
FB067
FB069
FB070
FB071
FB072
FB073
FB074
CL314
CL312
CL310
CL308
15 FSIG
14 GND
13 Y CONT
12 RVCC
11 Y D/A
10 GND
9 C CONT
8 RVCC
7 C D/A
6 GND
5 RSYNC
4 CHB
3 RHB
2 REVEN
1 RVB
-19 BOARD
1503 (A-LINE)
1504 (B-LINE)
(See page 4-98)

JS-25 BOARD

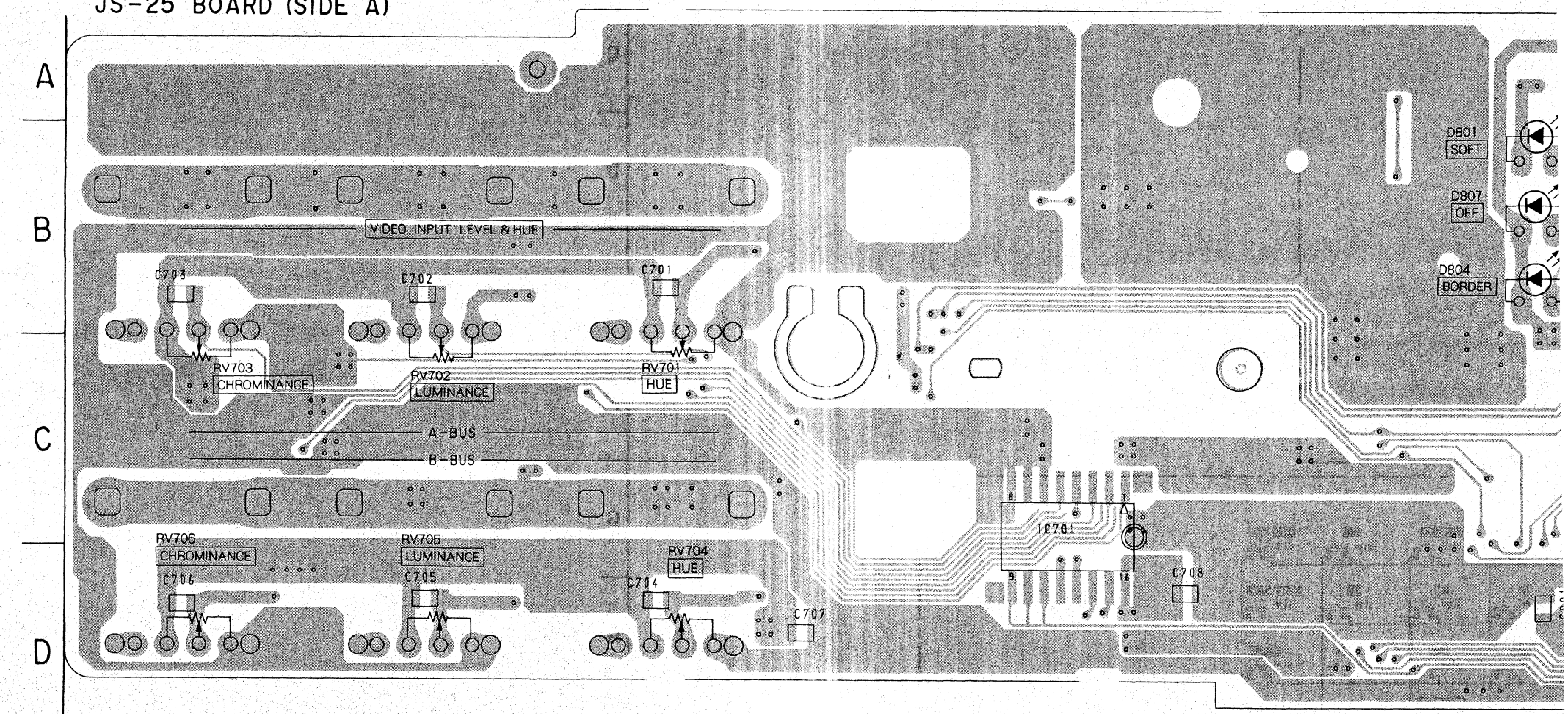
CN801	E-7
D801	B-7
D803	A-10
D804	B-7
D807	B-7
D809	A-13
D810	A-18
IC701	C-5
IC801	F-15



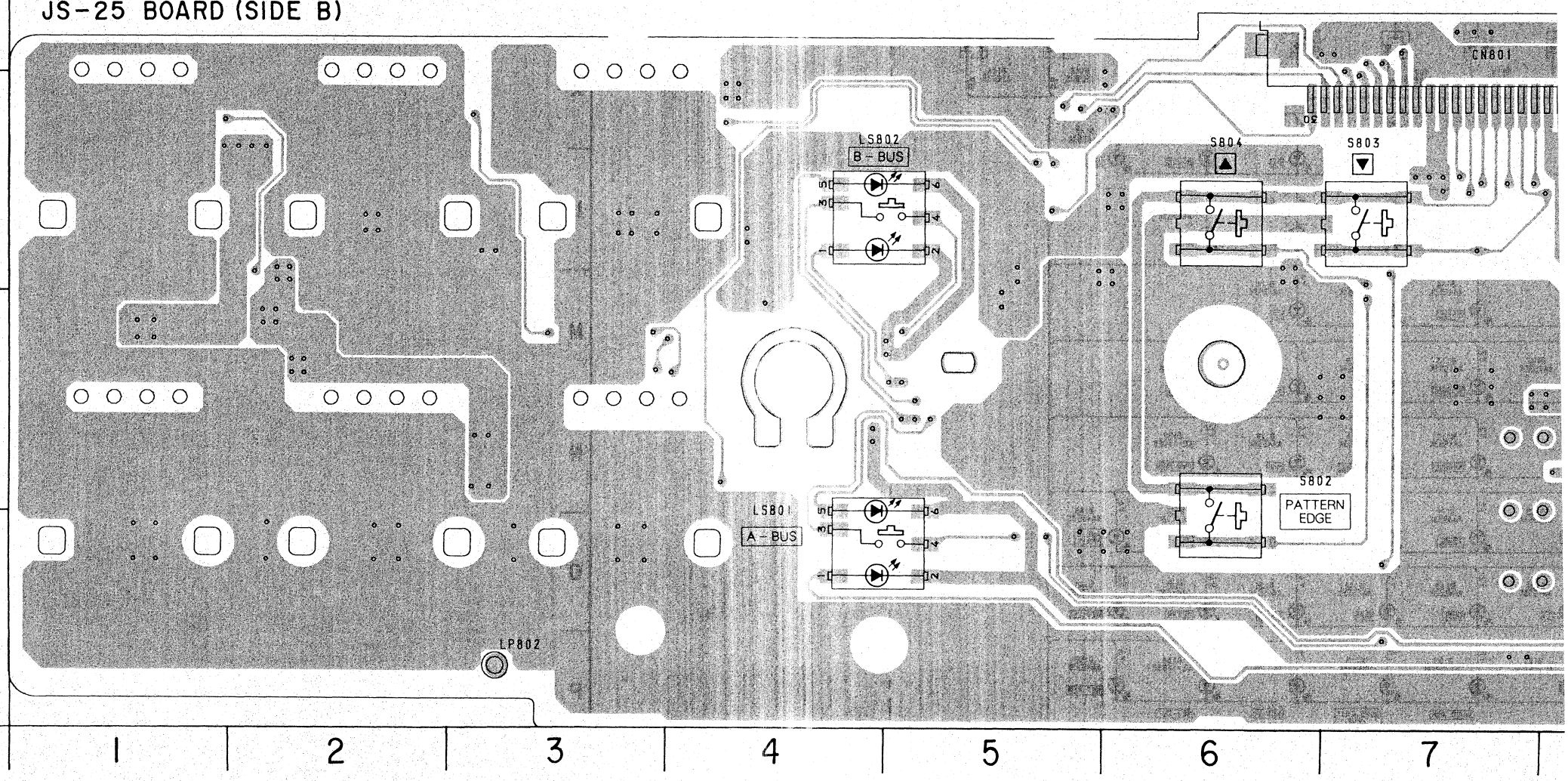
JS-25 (JOY STICK) PRINTED WIRING BOARD

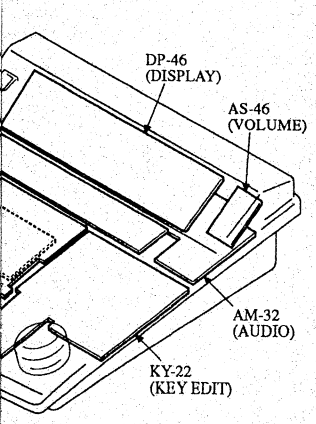
– Ref No. JS-25 BOARD : 3,000 Seriese –

JS-25 BOARD (SIDE A)



JS-25 BOARD (SIDE B)





D801
SOFT

D807
OFF

D804
BORDER

D803
CHROMA KEY /
LUMINA KEY

D809
POSITION

C807

RV802
HUE

RV805
POSITION

C805

C801

C808

RV803
GAIN/CLIP LOW

C806

RV801
CLIP/CLIP HIGH

CN801

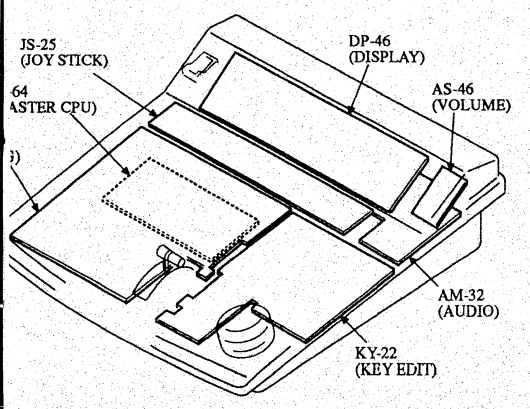
30

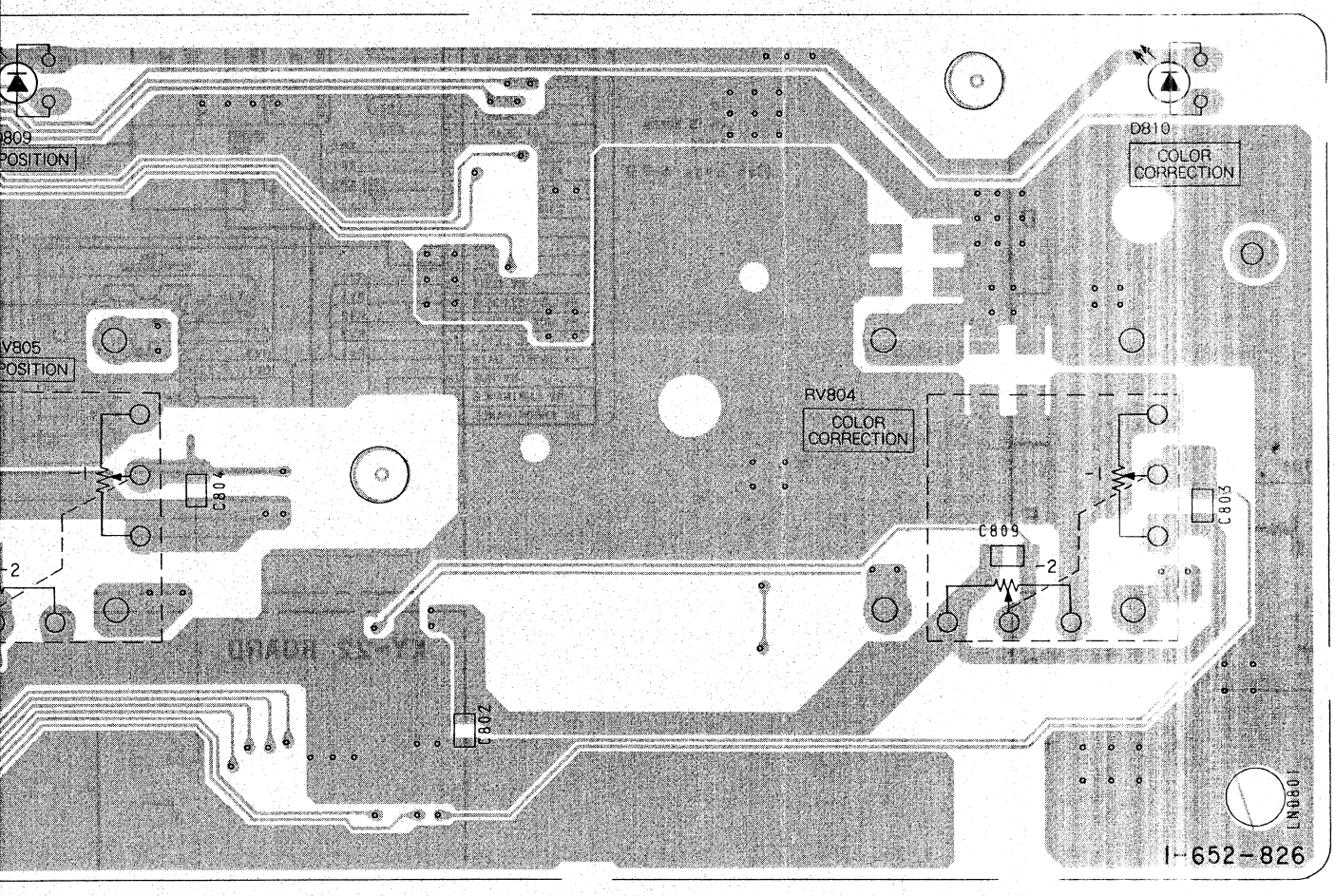
S803

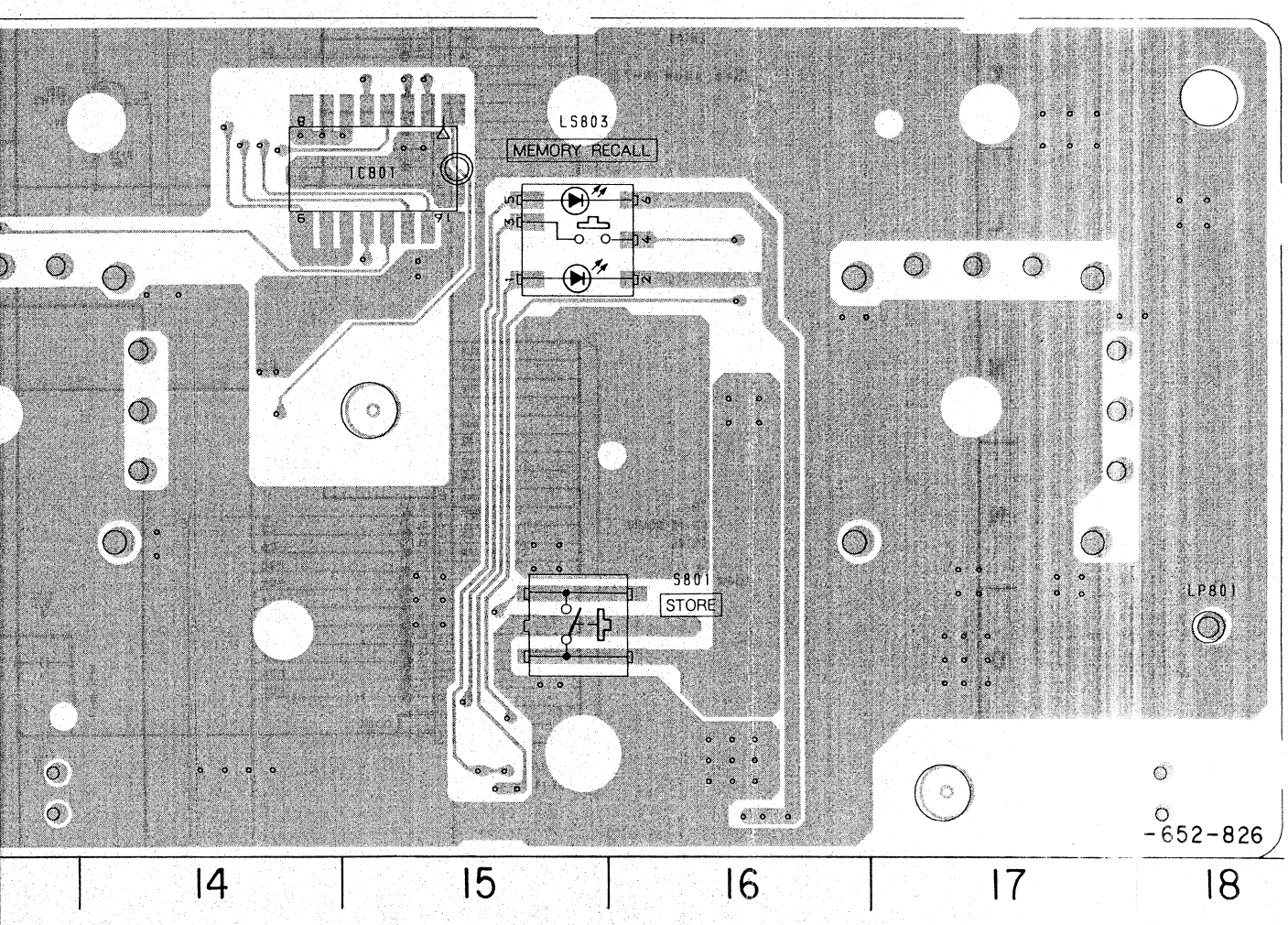
S802
PATTERN
EDGE

LS804
ON/OFF

7 8 9 10 11 12 13


JS-25
(JOY STICK)
64
ASTER CPU)
DP-46
(DISPLAY)
AS-46
(VOLUME)
AM-32
(AUDIO)
KY-22
(KEY EDIT)


POSITION
V805
POSITION
C804
RV804
COLOR
CORRECTION
D810
COLOR
CORRECTION
C809
C805
C802
LNQ801
I-652-826
11


IC801
LS803
MEMORY RECALL
S801
STORE
LP801
-652-826
11
14
15
16
17
18

JOY STICK

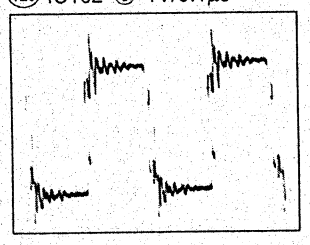
JS-25 (JOY STICK) /KY-22 (KEY EDIT) SCHEMATIC DIAGRAM

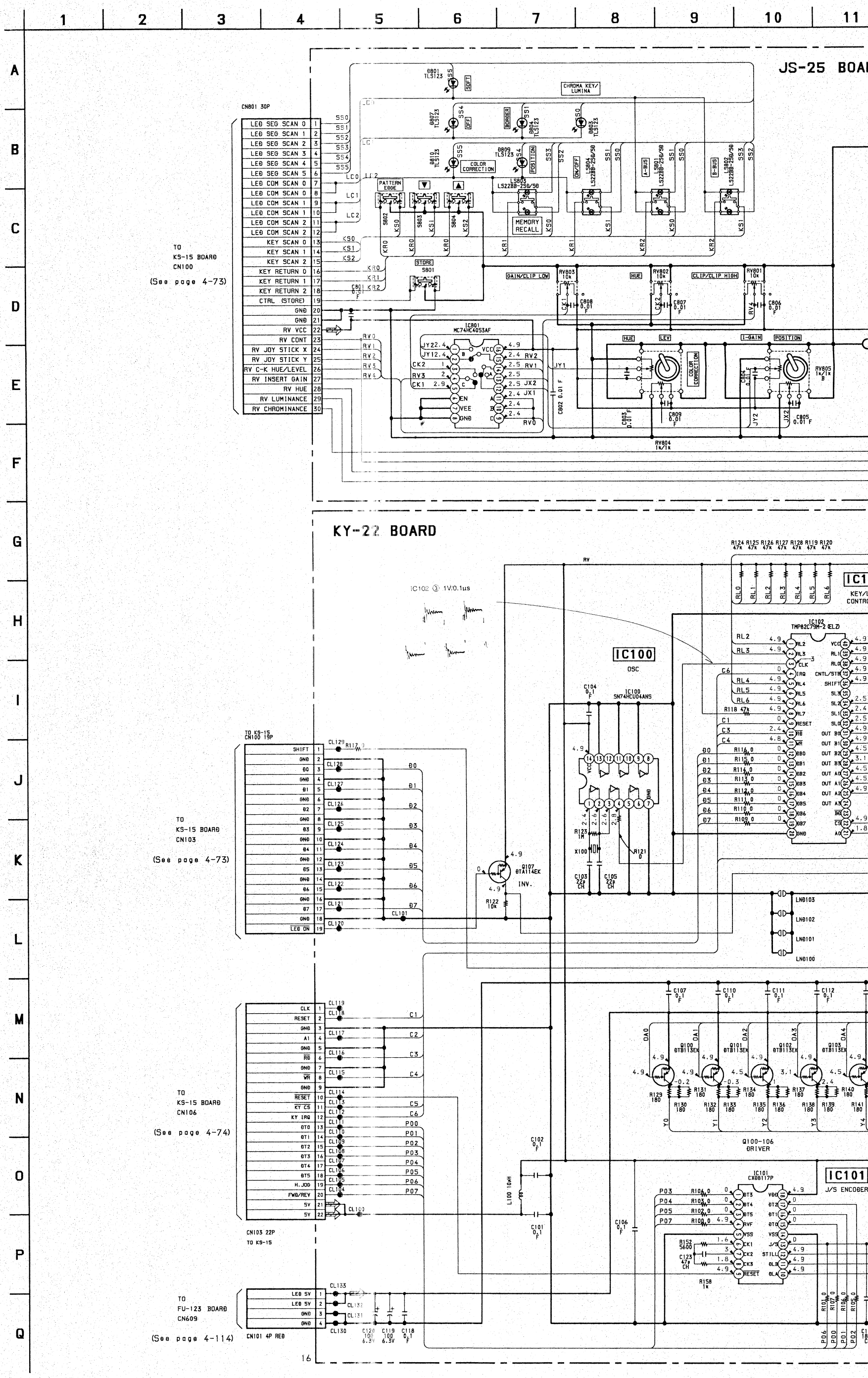
• See page 4-39 for JS-25 PRINTED WIRING BOARD

– Ref No. JS-25 BOARD : 3,000/KY-22 BOARD : 8,000 Seriese –

KY-22 board

(126) IC102 ③ 1V/0.1µs





5 BOARD

VIDEO INPUT LEVEL & HUE

RV701 10k B HUE — RV702 10k LUMINANCE — RV703 10k CHROMINANCE — A-BUS

RV704 10k HUE — RV705 10k LUMINANCE — RV706 10k CHROMINANCE — B-BUS

C701 0.01 F · C702 0.01 F · C703 0.01 F · C704 0.01 F · C705 0.01 F · C706 0.01 F · C707 0.01 F · C708 0.01 F

LN8801

IC701 SELECT SWITCH

IC701 MC74HC4053AF

IC102 KEY/LED CONTROLER

IC104 DECODER

IC104 SN74HC138ANS

C113 0.1 F · C117 0.1 F

SL0 SL1 SL2 · S0 S1 S2 S3 S4 S5 S6 S7

IC103 DRIVER

IC103 TB62383P

S0 S1 S2 S3 S4 S5 S6 S7 · E0 E1 E2 E3 E4 E5 E6 E7

C114 0.1 F · C112 0.1 F · C114 0.1 F · C115 0.1 F · C100 0.1 F

Q103 DTB113EK · Q104 DTB113EK · Q105 DTB113EK · Q106 DTB113EK

R139 180 · R140 180 · R141 180 · R142 180 · R143 180 · R144 180 · R145 180 · R146 180 · R159 180 · R160 180 · R161 180

R151 22k · R157 22k · R153 1k · R154 1k · R155 1k · R156 1k

R150 10k · R149 10k · R148 10k · R147 10k

C122 180p CH · C121 180p CH · C108 180p CH · C109 180p CH

CN102 6P: 1 REG 5V · 2 DIAL A · 3 DIAL B · 4 DIAL STILL · 5 H.JOB · 6 GND — TO J/S UNIT

IC101 J/S ENCODER

CUT EDIT · A-ROLL · A/B ROLL · MAN · SYNC-ROLL

ASMBL · V · A1 · A2 · AUDIO SPRIT

IN · OUT · DUR · GO TO · CLEAR

PREVIEW · AUTO EDIT /END · REVIEW · SOURCE · PGM · A-BUS · B-BUS

MARK IN · MARK OUT · SET DUR · SPEED · DMC

ALL STOP · PLAY · STILL · REW · FF

P1 · P2 · R-VTR · AUX

REC · SHIFT

D102 GL8E022 · D101 GL8E022 · D100 PG4553KY

D122 AA4553K · D131 AA4553K · D141 AA4553K · D147 AA4553K

D145 GL8HS22 · D121 BR4553K · D130 AA4553K · D140 AA4553K

D146 AA4553K · D120 AA4553K · D129 AA4553K

D107 AA4553K · D113 AA4553K · D119 AA4553K · D128 AA4553K · D138 AA4553K

D112 AA4553K · D118 AA4553K · D127 AA4553K · D137 CL-1405B

D105 AA4553K · D111 AA4553K · D117 AA4553K · D126 AA4553K · D136 AA4553K · D148 AA4553K

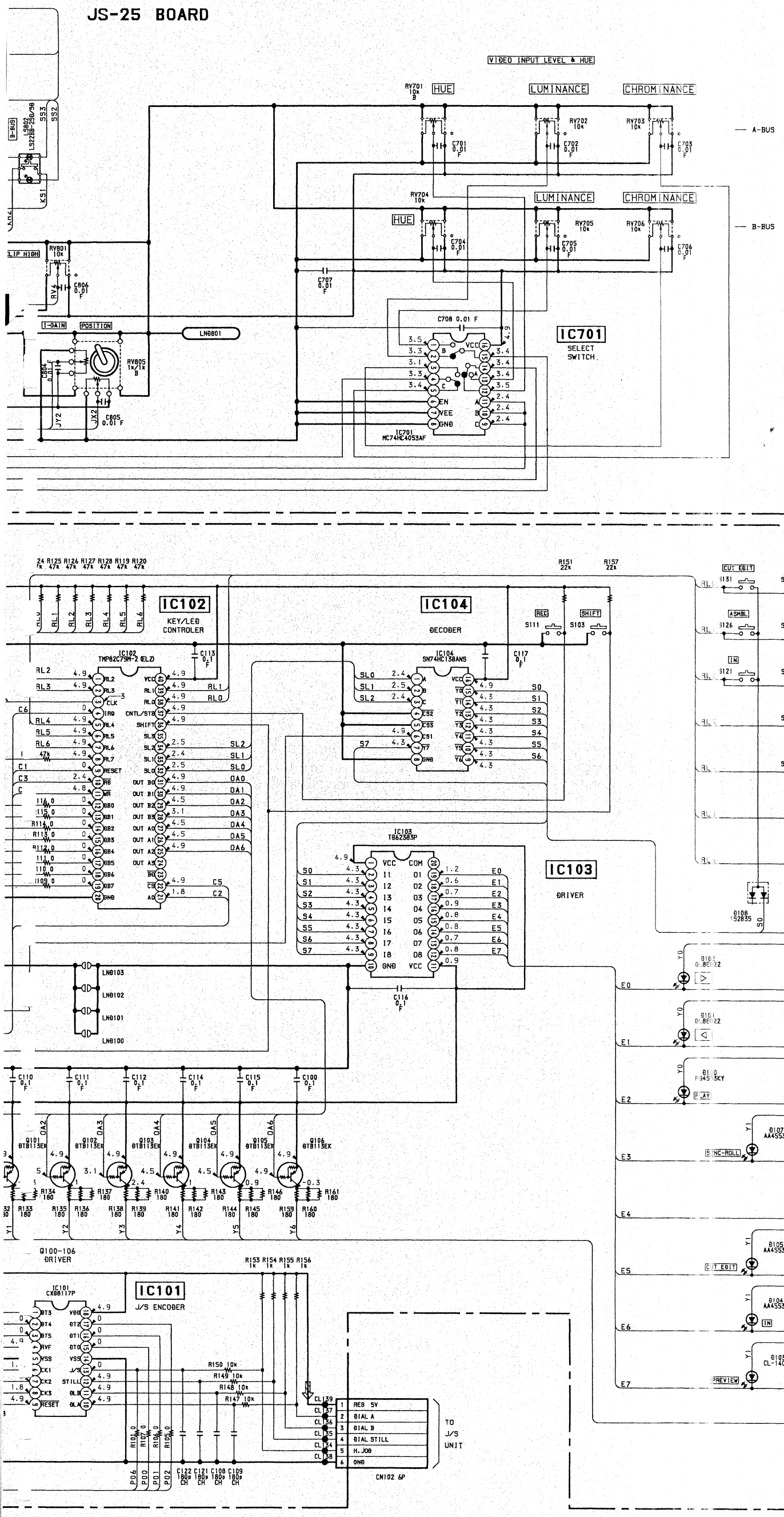
D104 AA4553K · D110 AA4553K · D116 AA4553K · D125 AA4553K · D135 AA4553K · D149 AA4553K

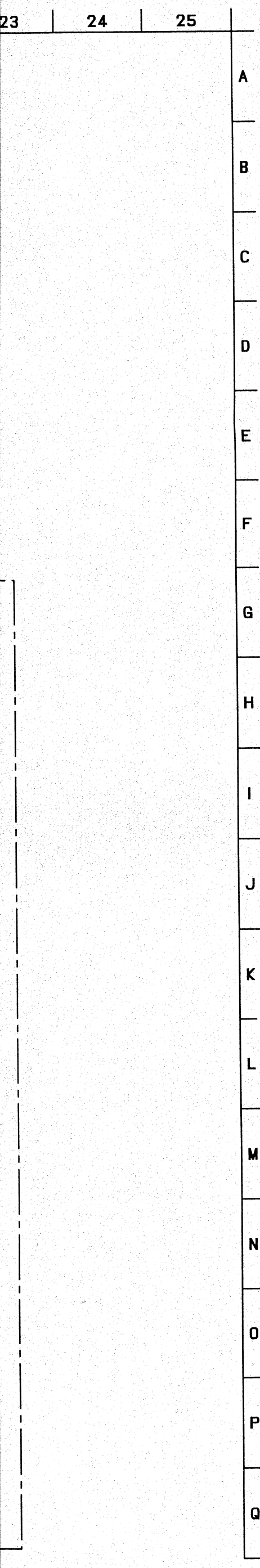
D103 CL-1405B · D109 CL-140UR · D115 BR4553K · D124 CL-1405B · D134 CL-1405B · D150 AA4553K

AUTO ASM · AUTO EDIT /END · SET-IN · SET-OUT

D108 152835 S0 · D114 152835 S1 · D123 152835 S2 · D132 152835 S3 · D133 152835 S4 · D142 152835 S5 · D143 152835 S6 · D144 152835 S7

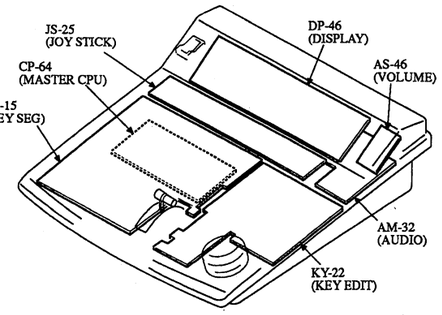
JS-25 BOARD


VIDEO INPUT LEVEL & HUE
HUE
LUMINANCE
CHROMINANCE
A-BUS
B-BUS
IC701
SELECT SWITCH
IC701 MC74HC4053AF
I-GAIN
POSITION
IC102
KEY/LED CONTROLER
IC102 TMP82C79M-2 (ELZ)
IC104
DECODER
IC104 SN74HC138ANS
IC103
DRIVER
IC103 TD62383P
IC101
J/S ENCODER
IC101 CX88117P
CUT EDIT
A-ROLL
A/B ROLL
MAN
SYNC-ROLL
ASMBL
V
A1
A2
AUDIO SPRIT
IN
OUT
BUR
GO TO
CLEAR
PREVIEW
AUTO EDIT /ENB
REVIEW
SOURCE
PGM
MARK IN
MARK OUT
SET BUR
SPEED
DMC
ALL STOP
PLAY
STILL
REW
FF
P1
P2
R-VTR
AUX
REC
SHIFT
LNB100
LNB101
LNB102
LNB103
TO J/S UNIT
CN102 6P
REG 5V
DIAL A
DIAL B
DIAL STILL
H.JOG
GND
Q100-106 DRIVER


23
24
25
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q

KY-22 BOARD

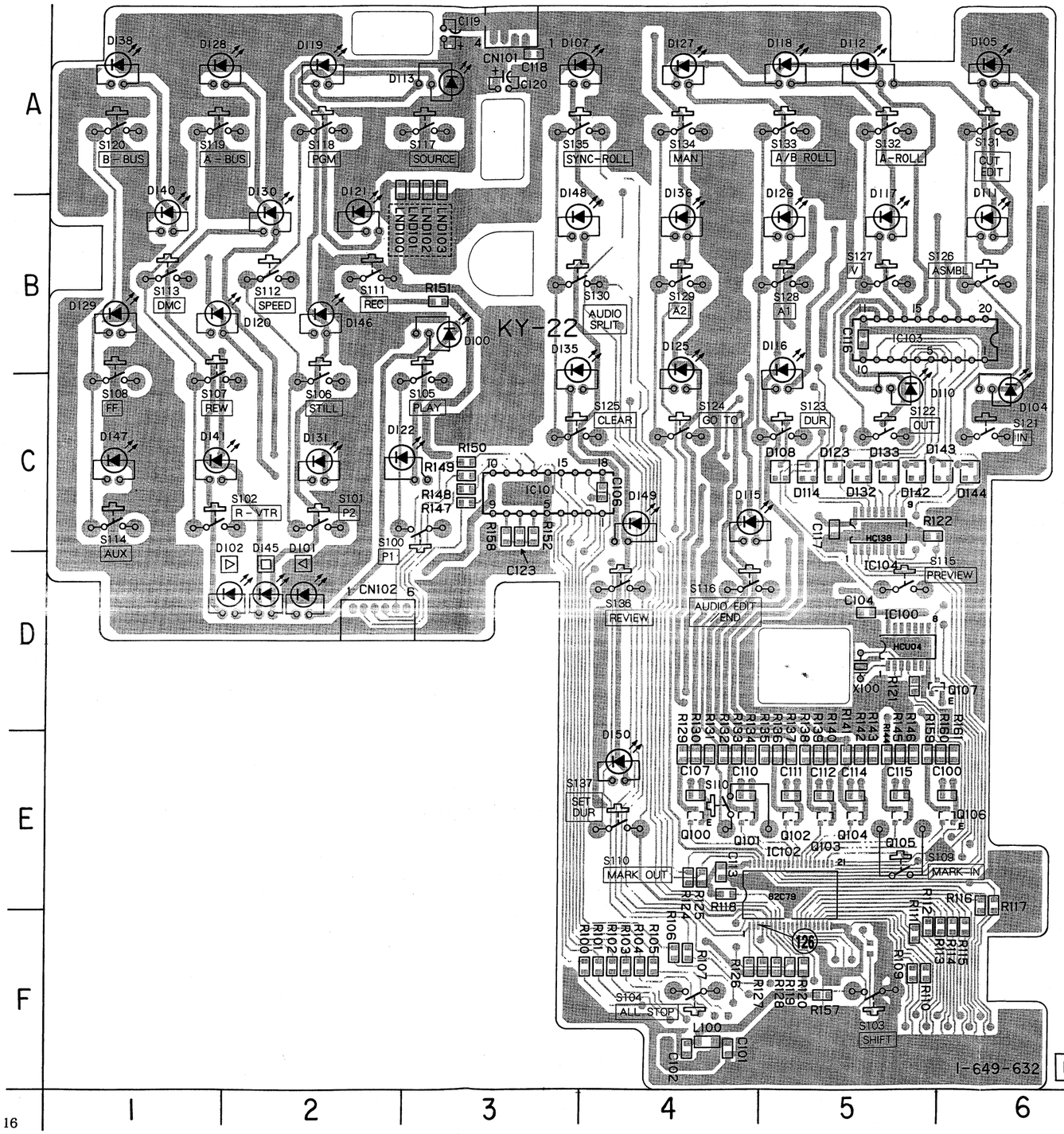
CN100	F-7	D130	B-2
CN101	A-3	D131	C-2
CN102	D-2	D132	C-5
CN103	F-9	D133	C-5
		D134	D-9
D100	B-3	D135	B-3
D101	D-2	D136	B-4
D102	D-2	D137	A-9
D103	C-8	D138	A-1
D104	C-6	D140	B-1
D105	A-6	D141	C-1
D107	A-3	D142	C-5
D108	C-5	D143	C-5
D109	C-9	D144	C-6
D110	C-5	D145	D-2
D111	B-6	D146	B-2
D112	A-5	D147	C-1
D113	A-2	D148	B-3
D114	C-5	D149	C-4
D115	C-4	D150	E-4
D116	B-5		
D117	B-5	IC100	D-5
D118	A-5	IC101	C-3
D119	A-2	IC102	E-5
D120	B-2	IC103	B-5
D121	B-2	IC104	C-5
D122	C-2		
D123	C-5	Q100	E-4
D124	D-8	Q101	E-4
D125	B-4	Q102	E-5
D126	B-5	Q103	E-5
D127	A-4	Q104	E-5
D128	A-1	Q105	E-5
D129	B-1	Q106	E-6
		Q107	D-5



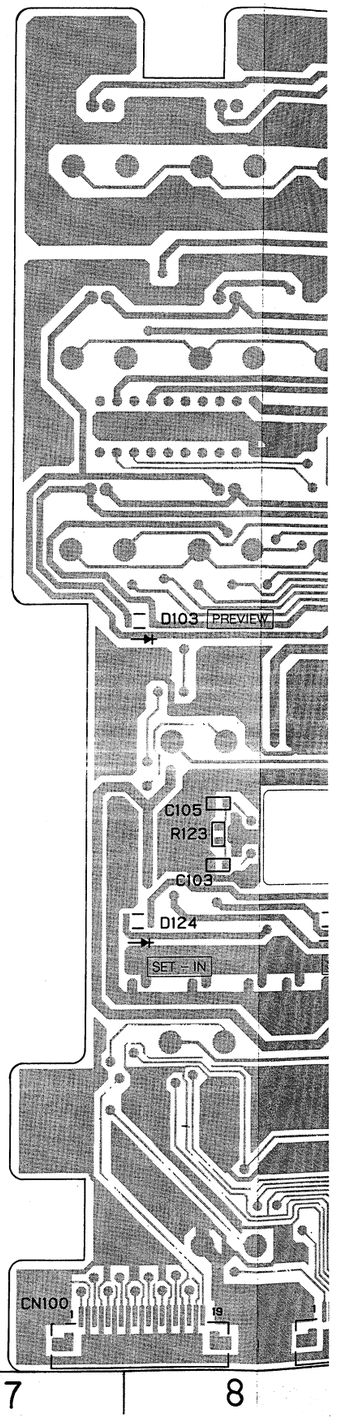
KY-22 (KEY EDIT) PRINTED WIRING BOARD

– Ref No. KY-22 BOARD : 8.000 Seriese –

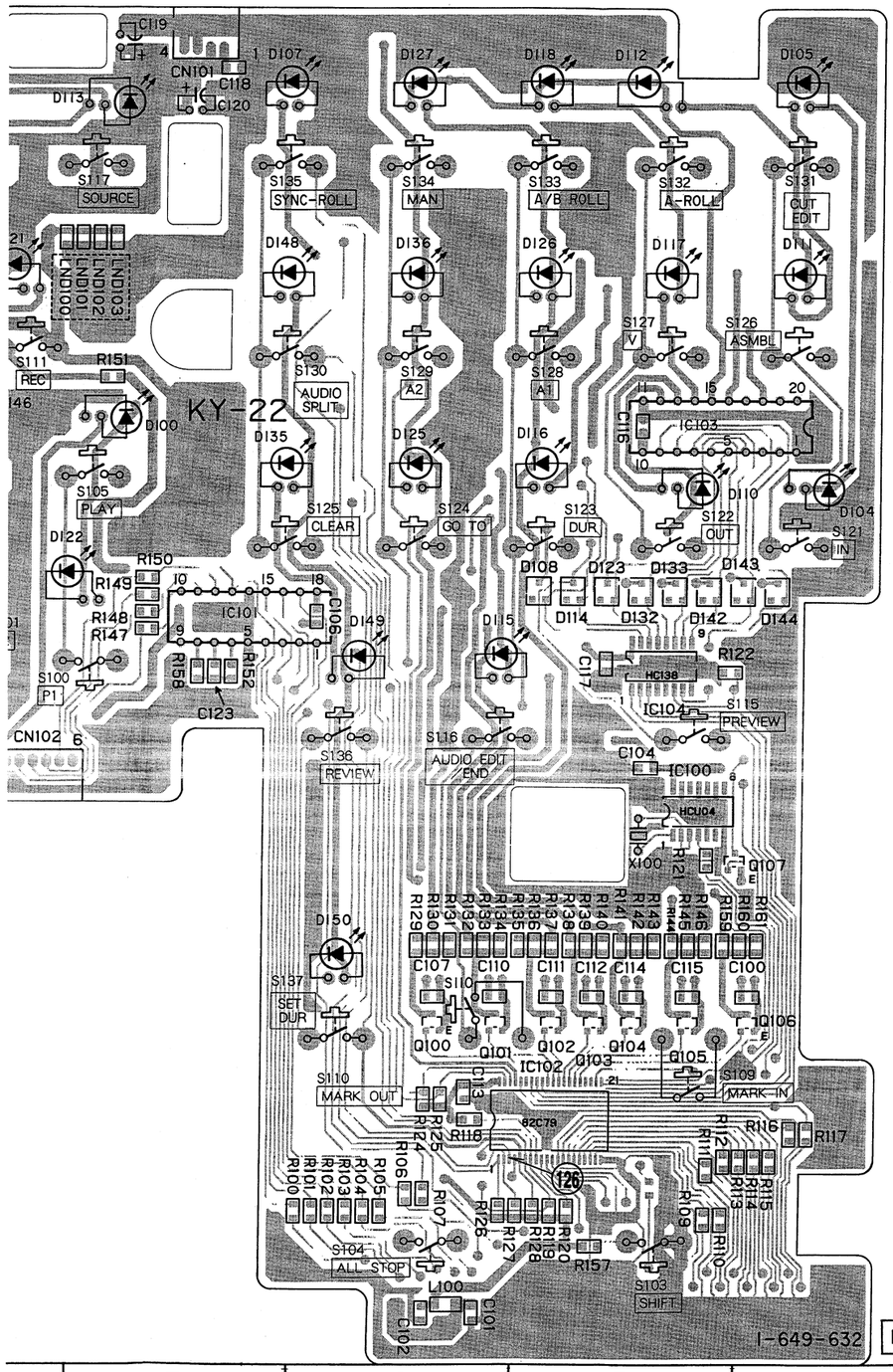
KY-22 BOARD (SIDE B)



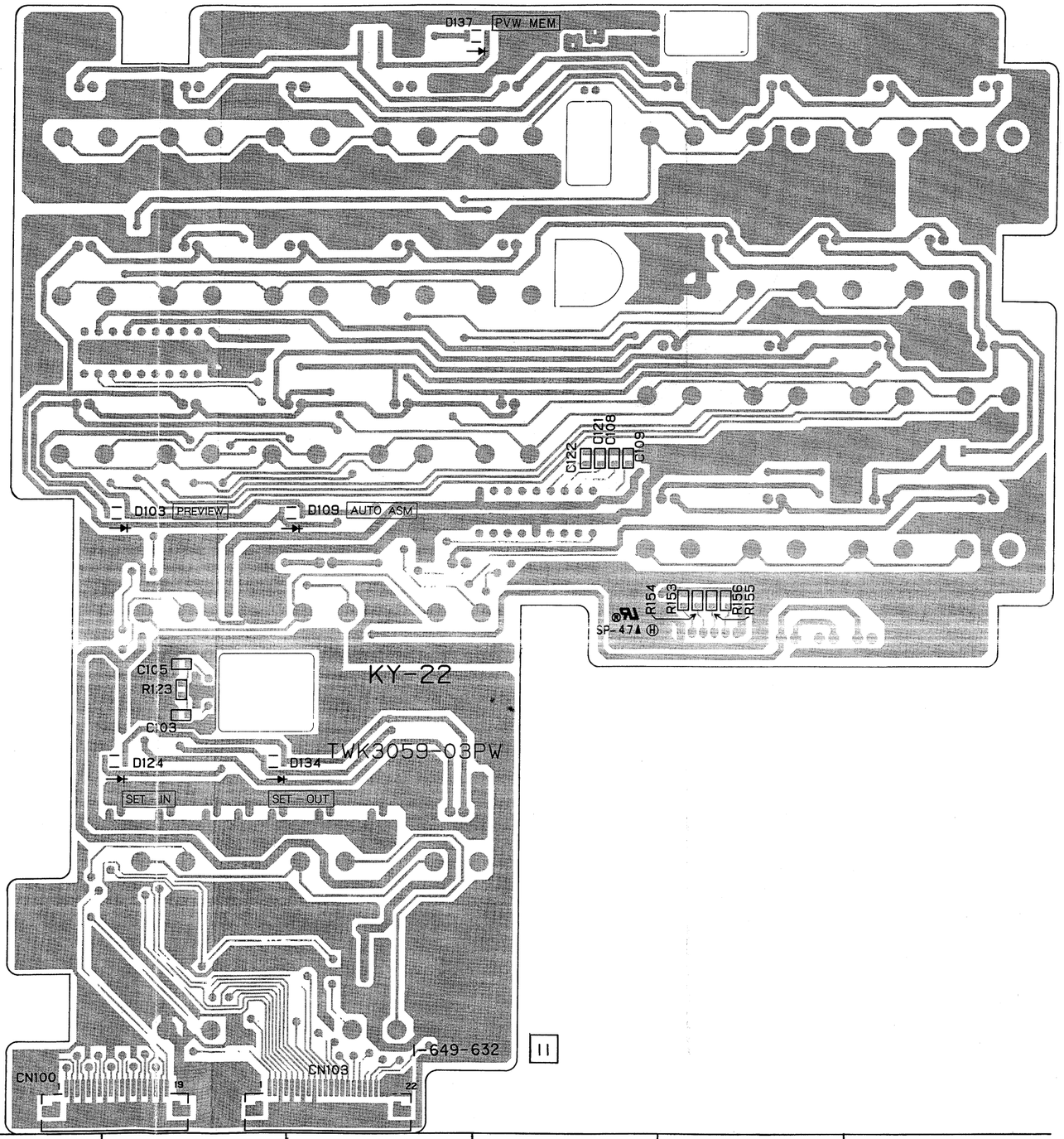
KY-22 BOARD (SIDE A)



3)



KY-22 BOARD (SIDE A)



3 4 5 6 7 8 9 10 11 12

4-48

4-49

KEY EDIT

RS-62 (RS-422/232C) /ED-41 (EDL INPUT/OUTPUT) PRINTED WIRING BOARD

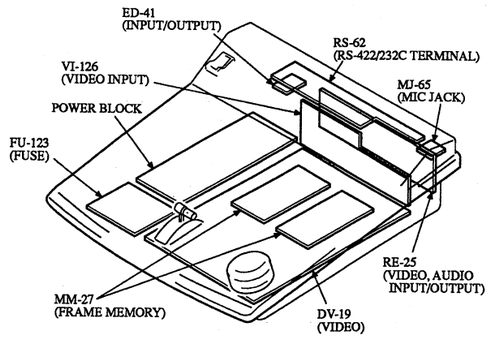
– Ref No. RS-62 BOARD : 4,000/ED-41 BOARD : 2,000 Seriese –

RS-62 BOARD

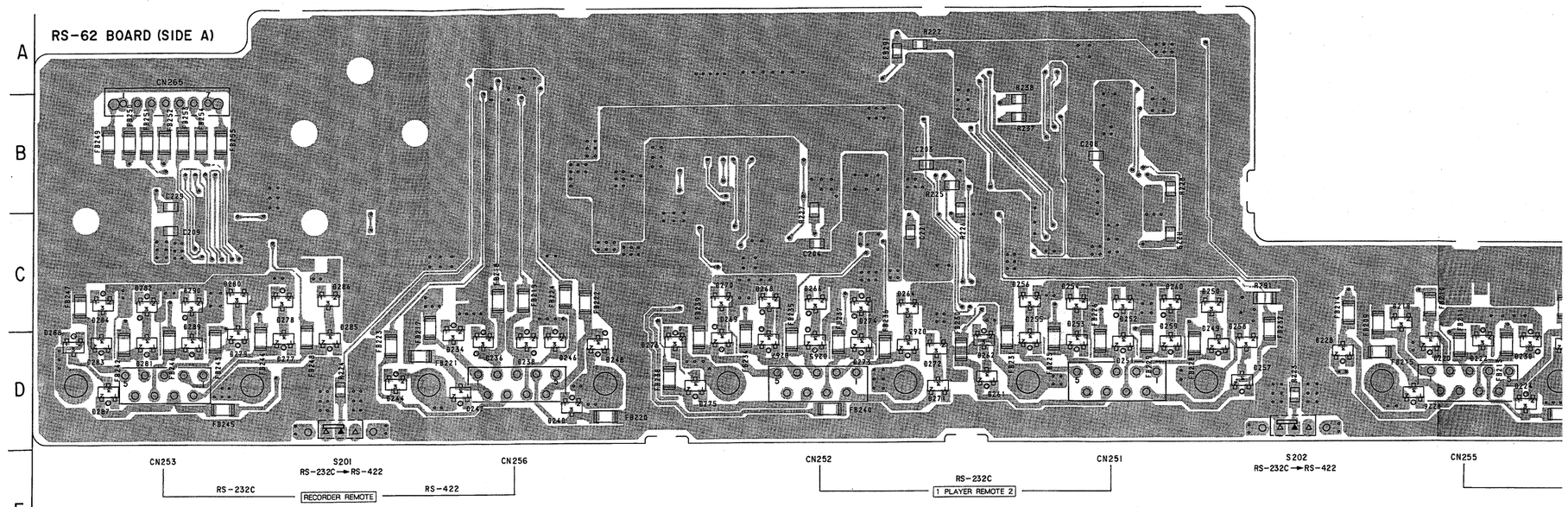
CN201	I-7	D258	C-11
CN251	D-10	D259	C-10
CN252	D-7	D260	C-10
CN253	D-2	D261	D-9
CN254	D-15	D262	D-9
CN255	D-13	D263	C-8
CN256	D-5	D264	C-8
CN265	A-2	D265	D-7
		D266	C-7
D202	C-15	D267	D-7
D204	C-15	D268	C-7
D206	C-15	D269	C-6
D208	D-16	D270	C-6
D210	D-15	D271	D-8
D212	D-14	D272	D-8
D214	C-16	D273	D-8
D216	C-16	D274	C-8
D218	C-12	D275	D-6
D220	D-12	D276	D-6
D222	C-13	D277	D-3
D224	D-13	D278	C-3
D226	D-12	D279	D-2
D228	C-12	D280	C-2
D230	C-13	D281	D-2
D232	C-14	D282	C-2
D234	D-4	D283	D-1
D236	D-4	D284	C-1
D238	D-5	D285	C-3
D240	D-5	D286	C-3
D242	D-4	D287	A-1
D244	D-4	D288	A-1
D246	D-5	D289	C-2
D248	D-5	D290	C-2
D249	C-10		
D250	C-10	IC202	H-6
D251	D-10	IC203	H-7
D252	C-10	IC204	H-10
D253	C-9	IC206	I-9
D254	C-9	IC207	G-8
D255	C-9	IC208	H-6
D256	C-9	IC209	H-2
D257	D-11		

ED-41 BOARD

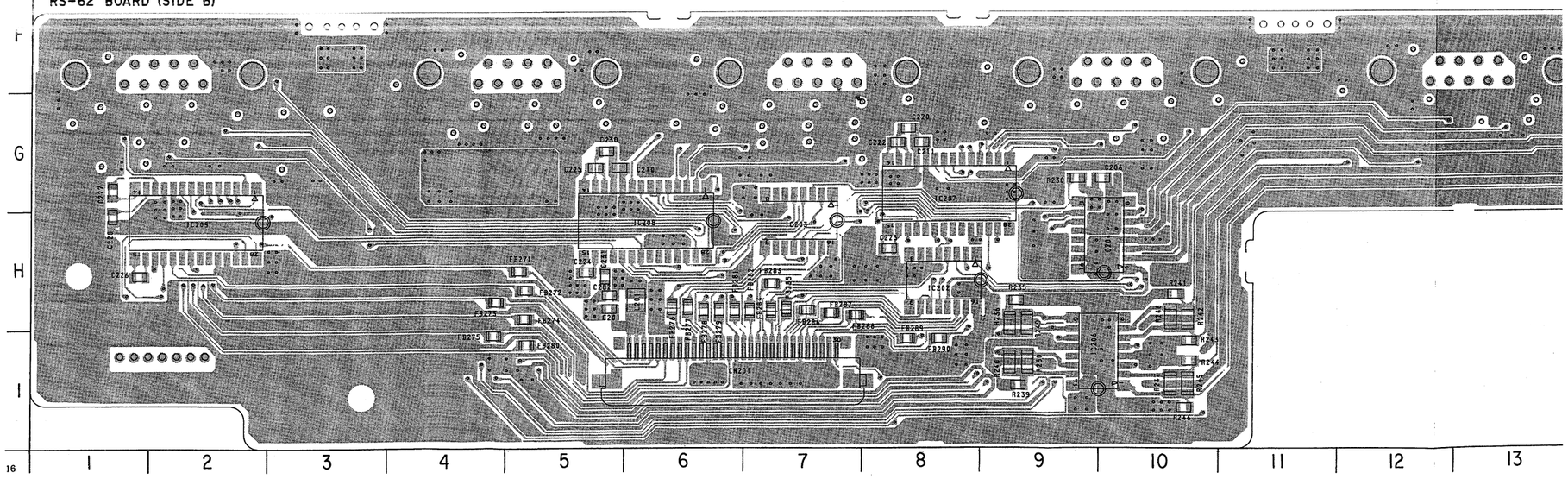
CN260	D-19
D851	C-18
D852	C-18
D853	F-19
D854	G-19
D855	G-19
D856	G-19
D857	D-18
D858	D-18
D859	D-19
D860	D-19
D861	C-19
D862	C-19
D863	G-19
D864	G-19
W210	B-19



RS-62 BOARD (SIDE A)

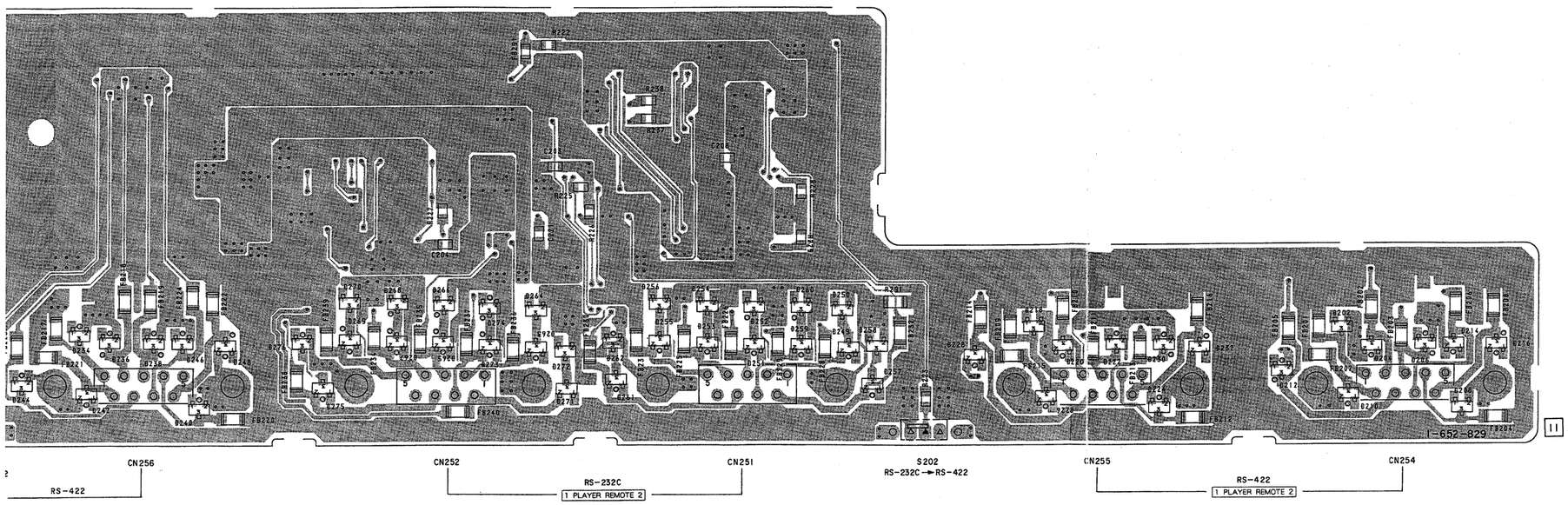


RS-62 BOARD (SIDE B)

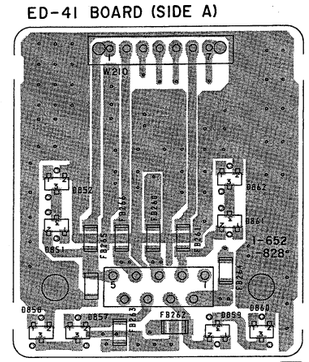


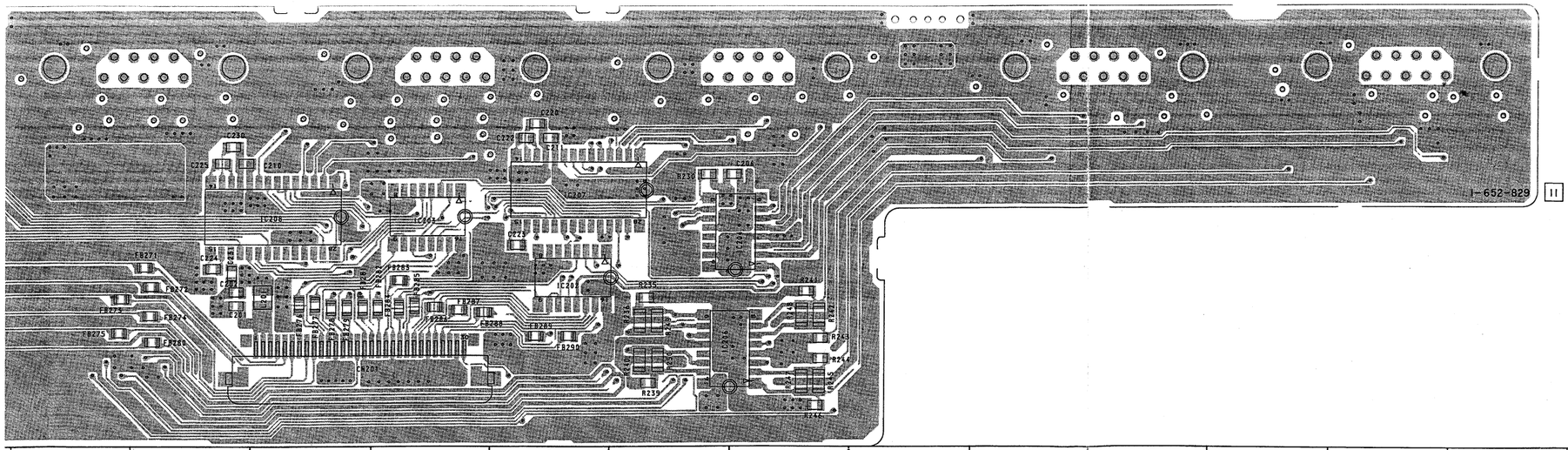
IT) PRINTED WIRING BOARD

,000 Seriese –

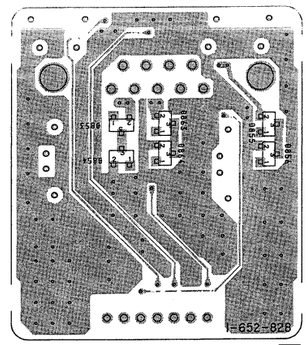


ED-41 BOARD (SIDE A)





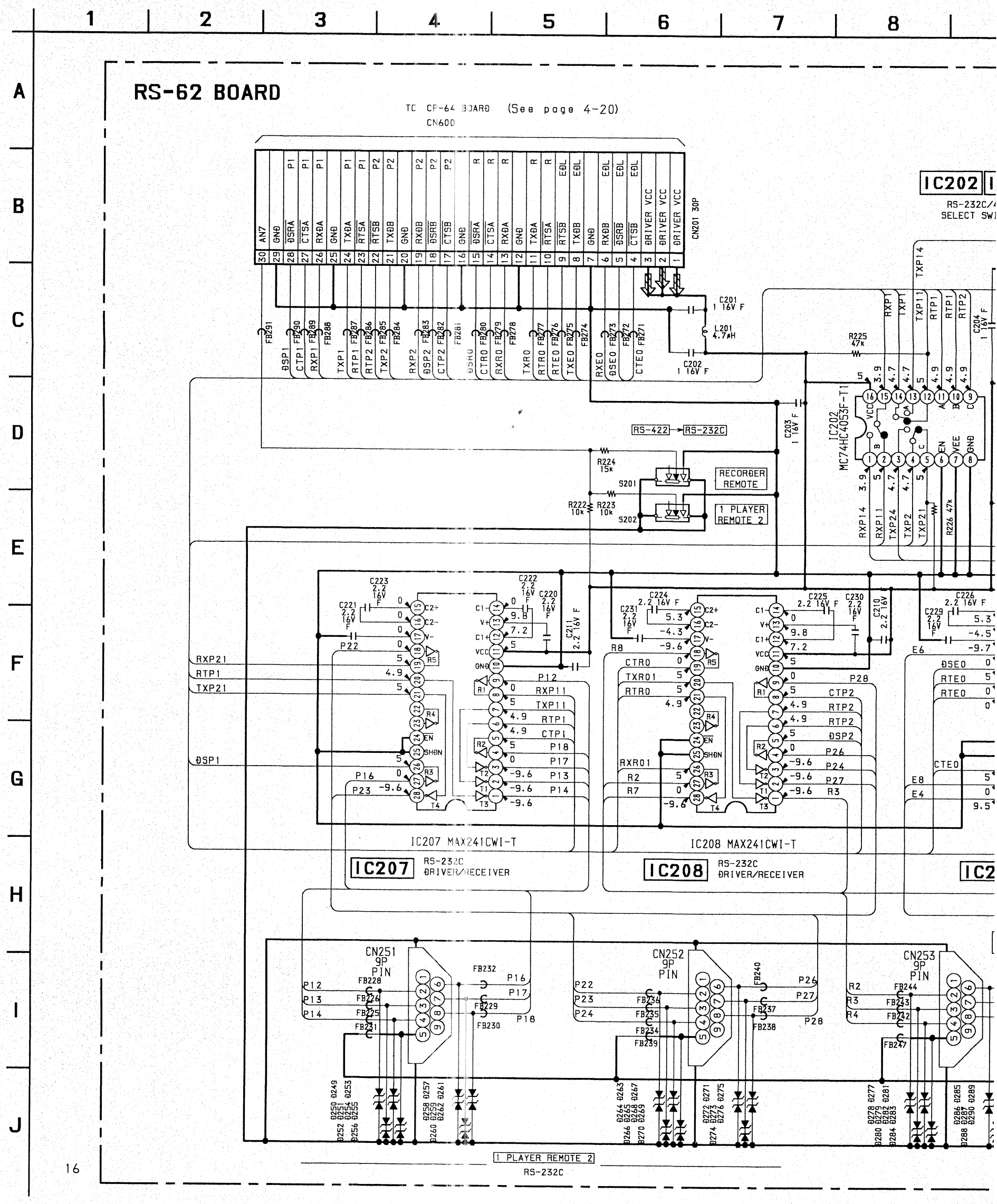
ED-41 BOARD (SIDE B)



4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

RS-62 (RS-422/232C) /ED-41 (EDL INPUT/OUTPUT) SCHEMATIC DIAGRAM

– Ref No. RS-62 BOARD : 4,000/ED-41 BOARD : 2,000 Seriese –



7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

IC202 IC203
RS-232C/422
SELECT SWITCH

CN251-CN253

IC204
RS-422
ÐRIVER

Ð202-248 RÐ9.1M

IC202 MC74HC4053F-T1
IC203 MC74HC4053F-T1
IC204 AM26LS31CNS-T1
IC206 AM26LS32ACNS-T1

RS-422
ÐRIVER
IC206

IC209 MAX241CWI-T
IC209 RS-232C
ÐRIVER/RECEIVER

CN256 9P SOCKET
CN254 9P SOCKET

RECORÐER REMOTE
RS-232C
CN253 9P PIN

CN265 7P

E3	FB255	7	TXÐ EÐL
E2	FB254	6	RXÐ EÐL
E7	FB253	5	RTS EÐL
E8	FB252	4	CTS EÐL
E6	FB251	3	ÐSR EÐL
E4	FB250	2	ÐTR EÐL
		1	GNÐ

W210 7P

3	TXÐ EÐL	7	FB260
2	RXÐ EÐL	6	FB261
7	RTS EÐL	5	FB262
8	CTS EÐL	4	FB263
6	ÐSR EÐL	3	FB264
4	ÐTR EÐL	2	FB266
5	GNÐ	1	FB265

ED-41 BOARD

Ð249-290 RÐ18M

IC202 IC203
RS-232C/422
SELECT SWITCH

IC204
RS-422
ÐRIVER

IC206
RS-422
ÐRIVER

IC208 RS-232C ÐRIVER/RECEIVER

IC209 RS-232C ÐRIVER/RECEIVER

CN201 30P

CN251-CN253

CN256 9P SOCKET

CN254 9P SOCKET

IC202 MC74HC4053F-T1

IC203 MC74HC4053F-T1

IC204 AM26LS31CNS-T1

IC206 AM26LS32ACNS-T1

IC208 MAX241CWI-T

IC209 MAX241CWI-T

RECORÐER REMOTE

1 PLAYER REMOTE 2

RS-232C

RECORÐER REMOTE

CN252 9P PIN

CN253 9P PIN

Ð249-290 RÐ18M

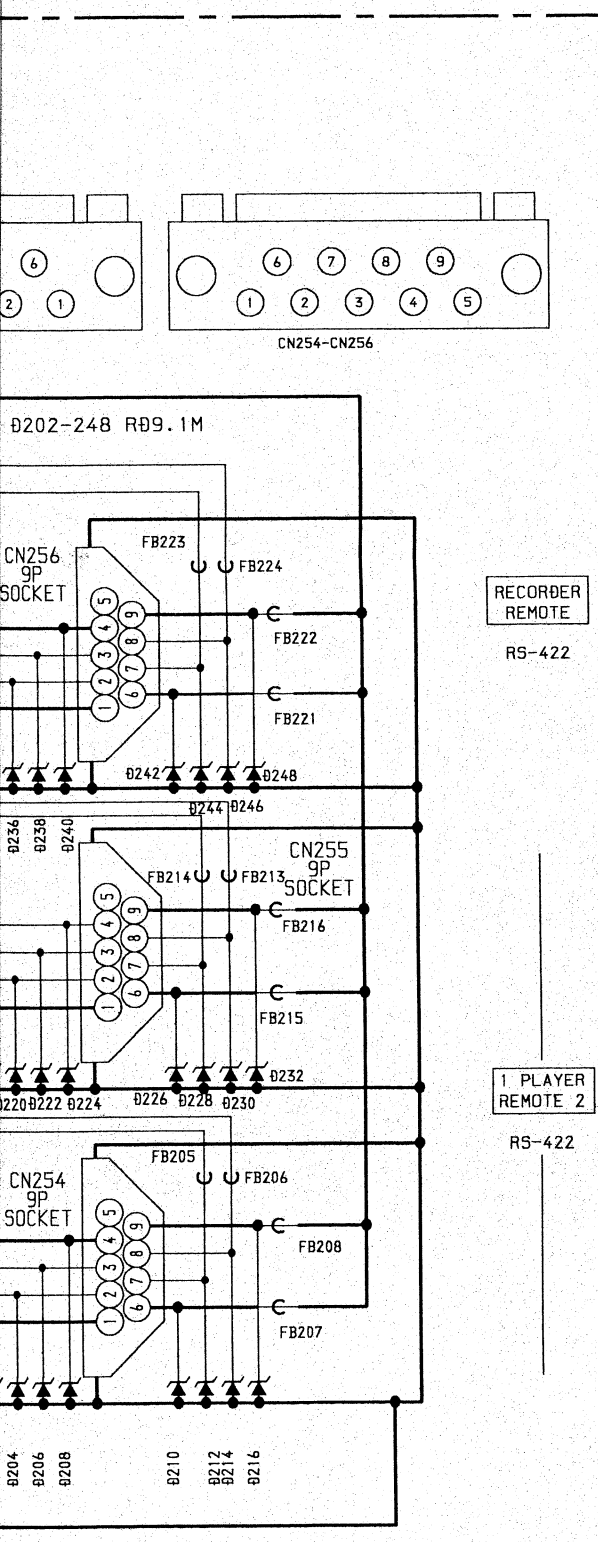
CN265 7P

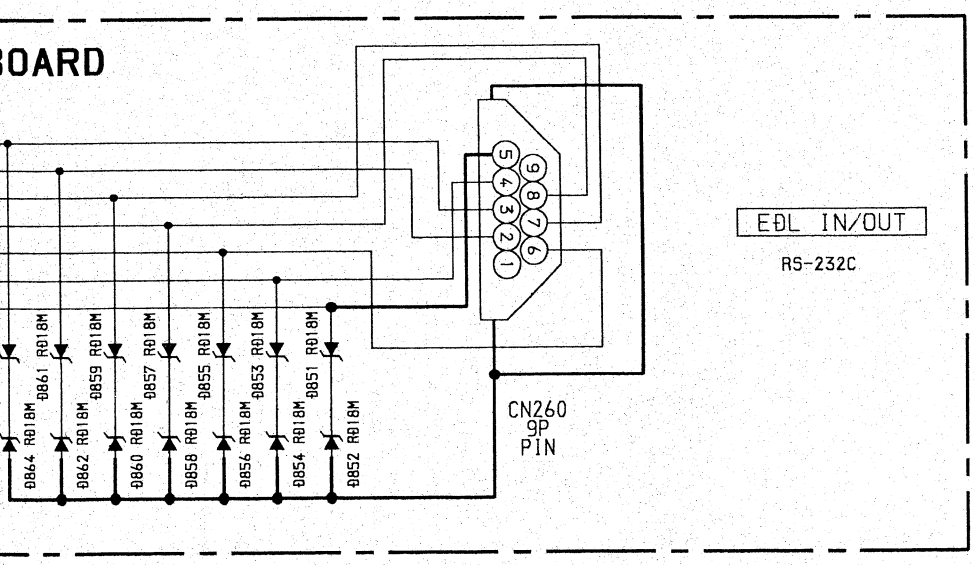
7	TXÐ EÐL	7
6	RXÐ EÐL	6
5	RTS EÐL	5
4	CTS EÐL	4
3	ÐSR EÐL	3
2	ÐTR EÐL	2
1	GNÐ	1

W210 7P

ED-41 BOAR

16 | 17 | 18 | 19 | 20

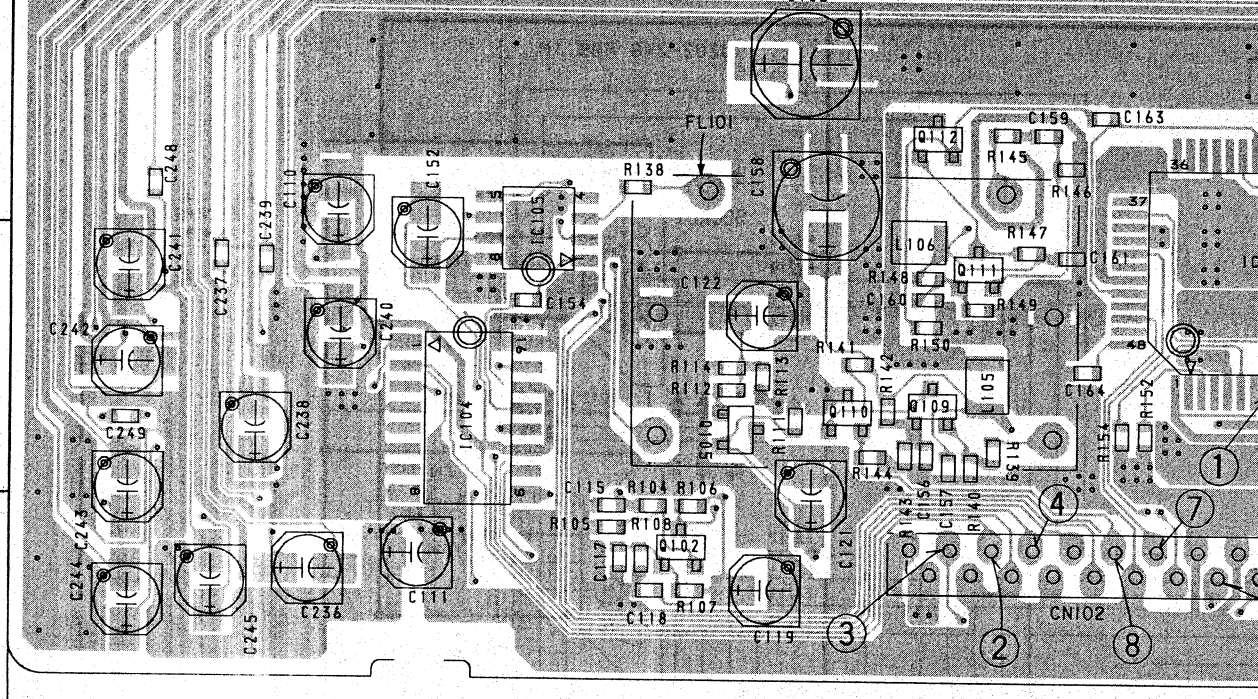

CN254-CN256
RD202-248 RD9.1M
CN256
9P
SOCKET
FB223
FB224
FB222
FB221
RECORDER
REMOTE
RS-422
D242
D248
D244
D246
D236
D238
D240
CN255
9P
SOCKET
FB214
FB213
FB216
FB215
D232
D220
D222
D224
D226
D228
D230
1 PLAYER
REMOTE 2
RS-422
FB205
FB206
CN254
9P
SOCKET
FB208
FB207
D204
D206
D208
D210
D212
D214
D216


BOARD
EDL IN/OUT
RS-232C
CN260
9P
PIN
D864 RD18M
D861 RD18M
D862 RD18M
D859 RD18M
D860 RD18M
D857 RD18M
D858 RD18M
D855 RD18M
D856 RD18M
D853 RD18M
D854 RD18M
D851 RD18M
D852 RD18M

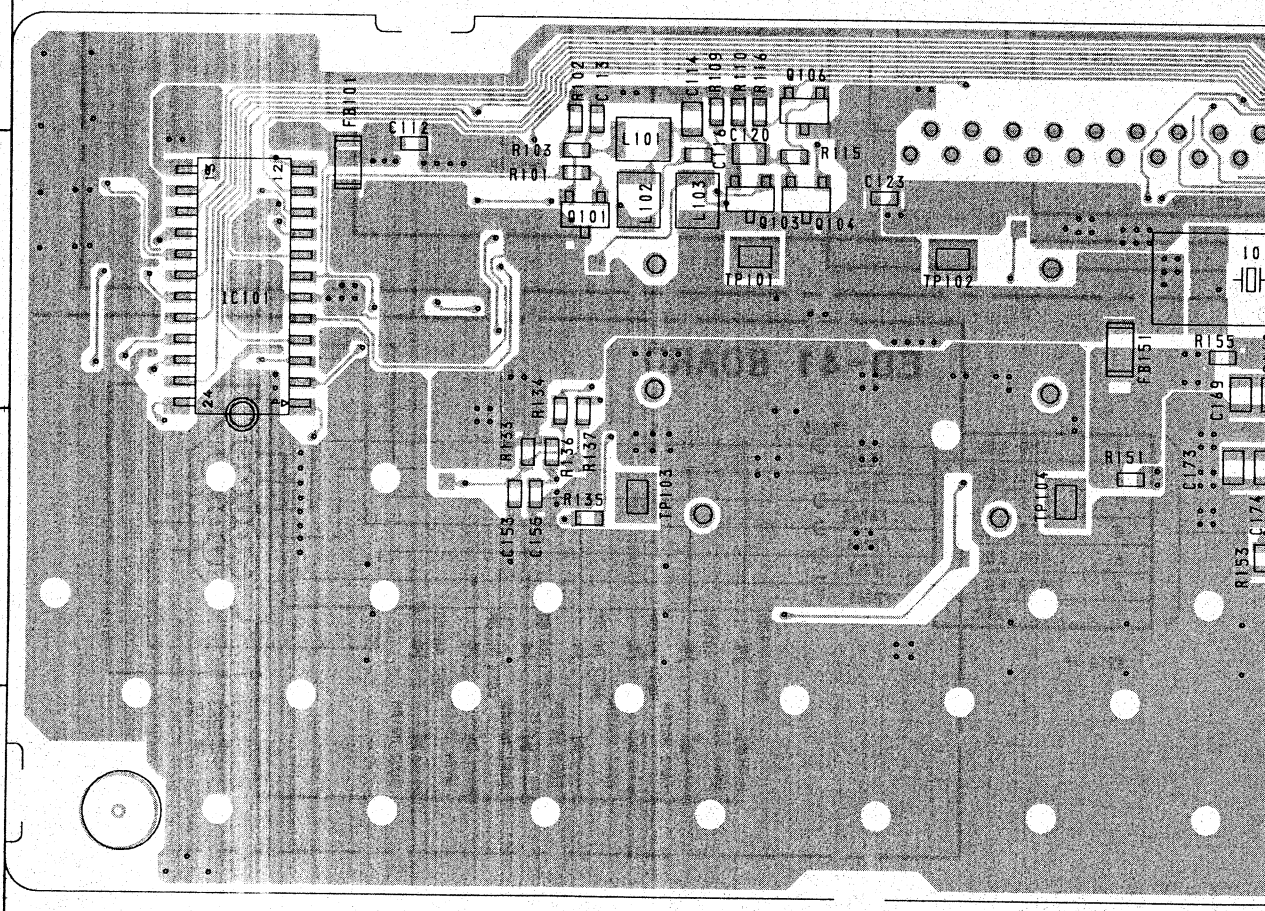
VI-126 (VIDEO INPUT) PRINTED WIRING BOARD

– Ref No. VI-126 BOARD : 6,000 Seriese –

VI-126 BOARD (SIDE A)

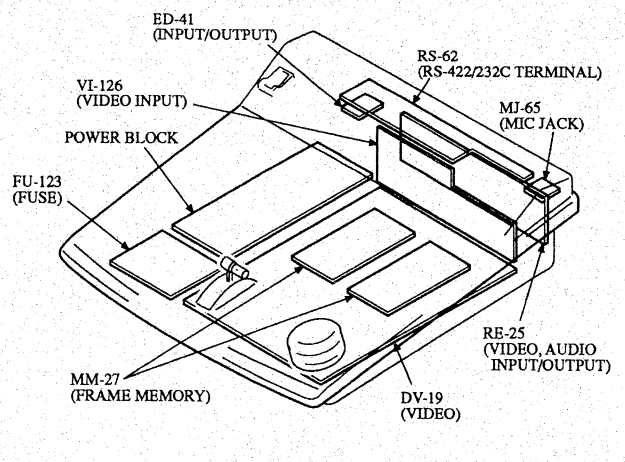


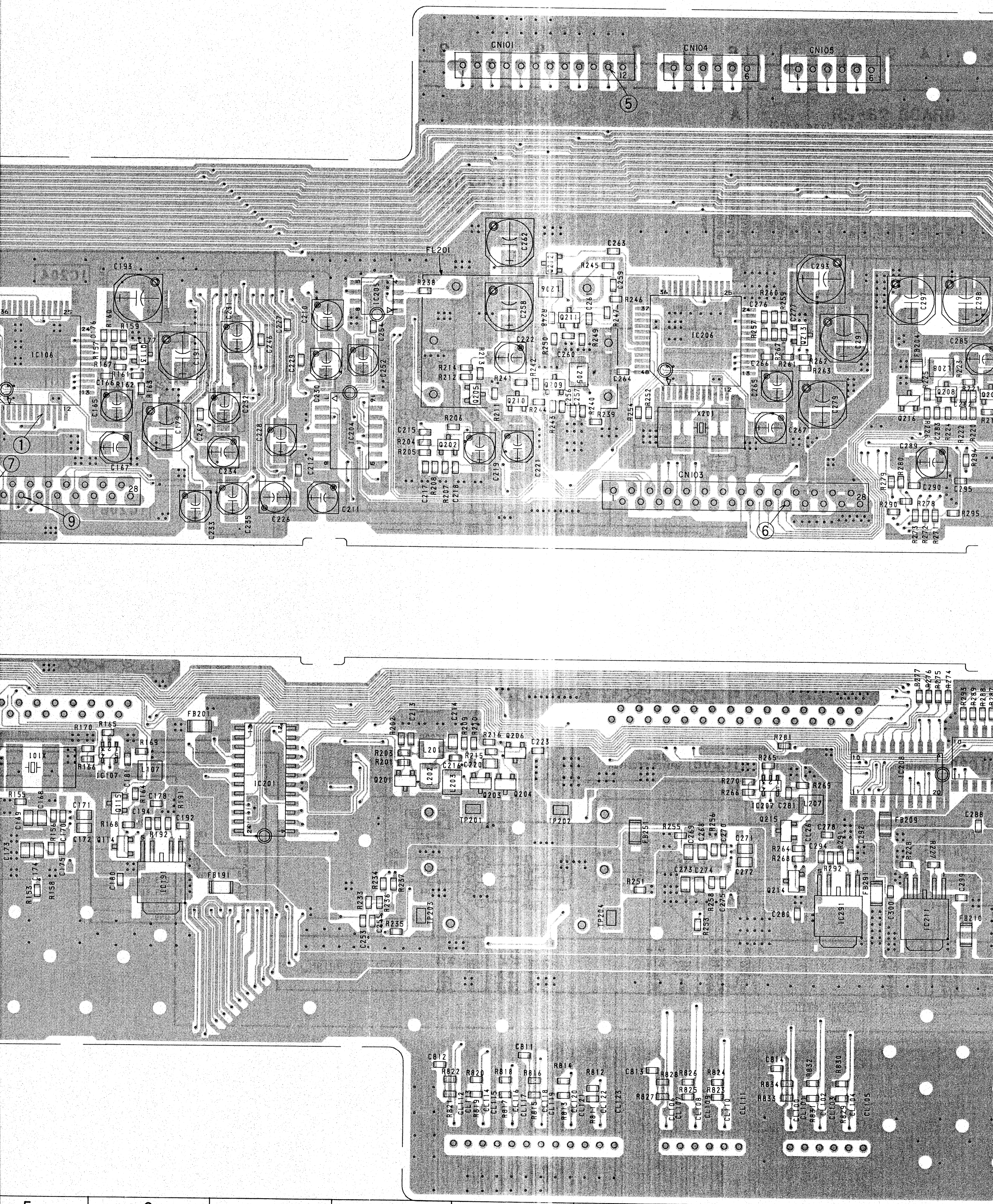
VI-126 BOARD (SIDE B)

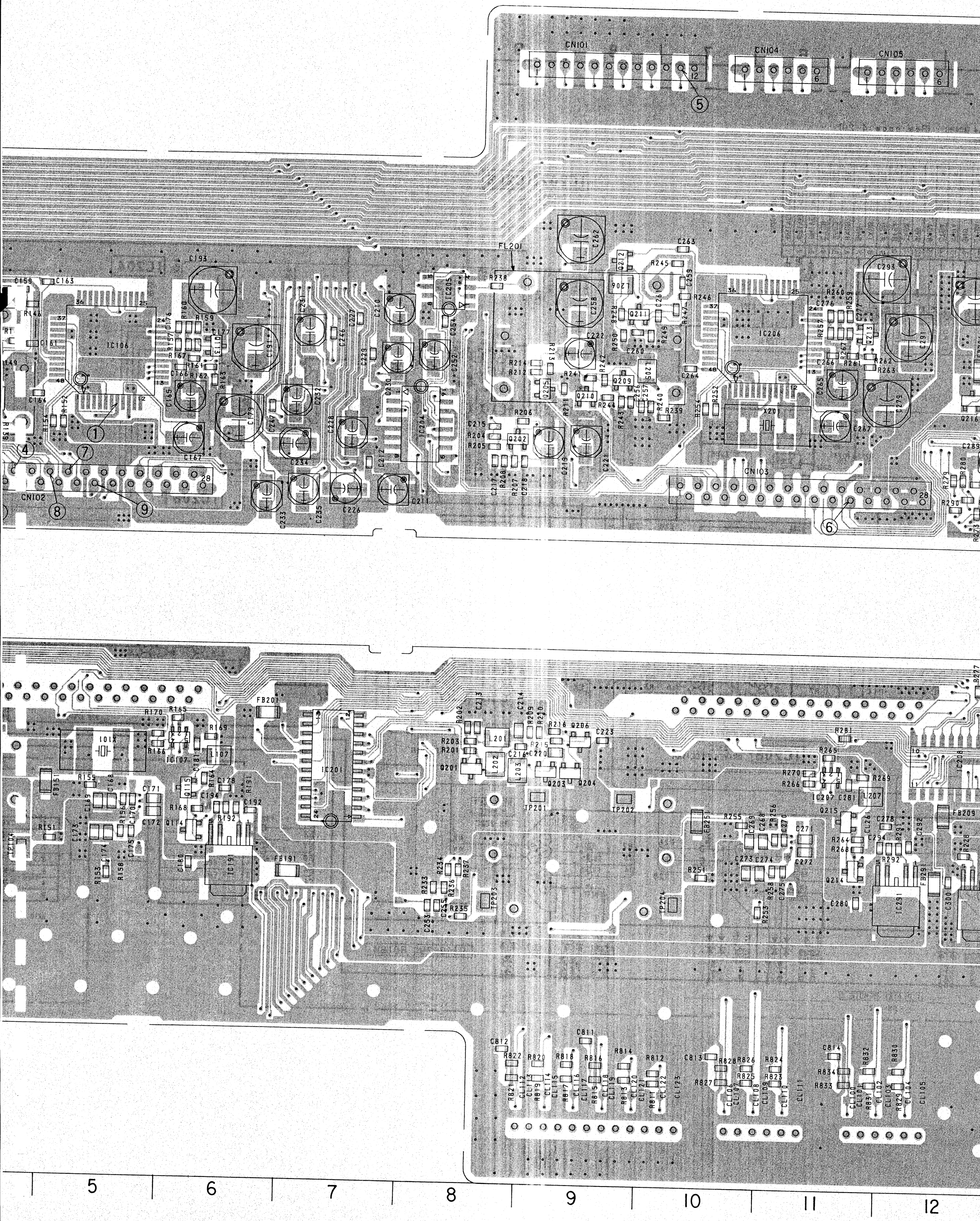


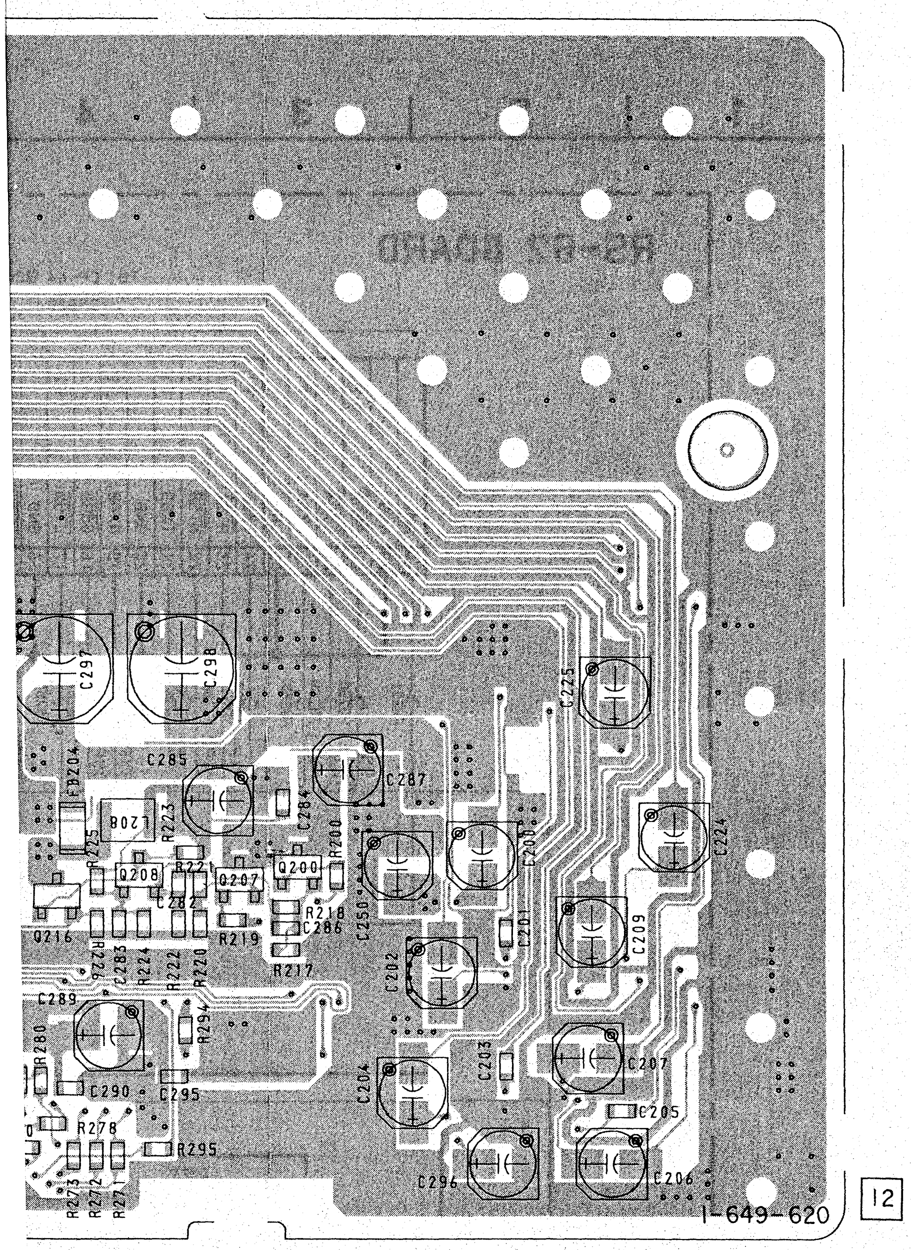
VI-126 BOARD

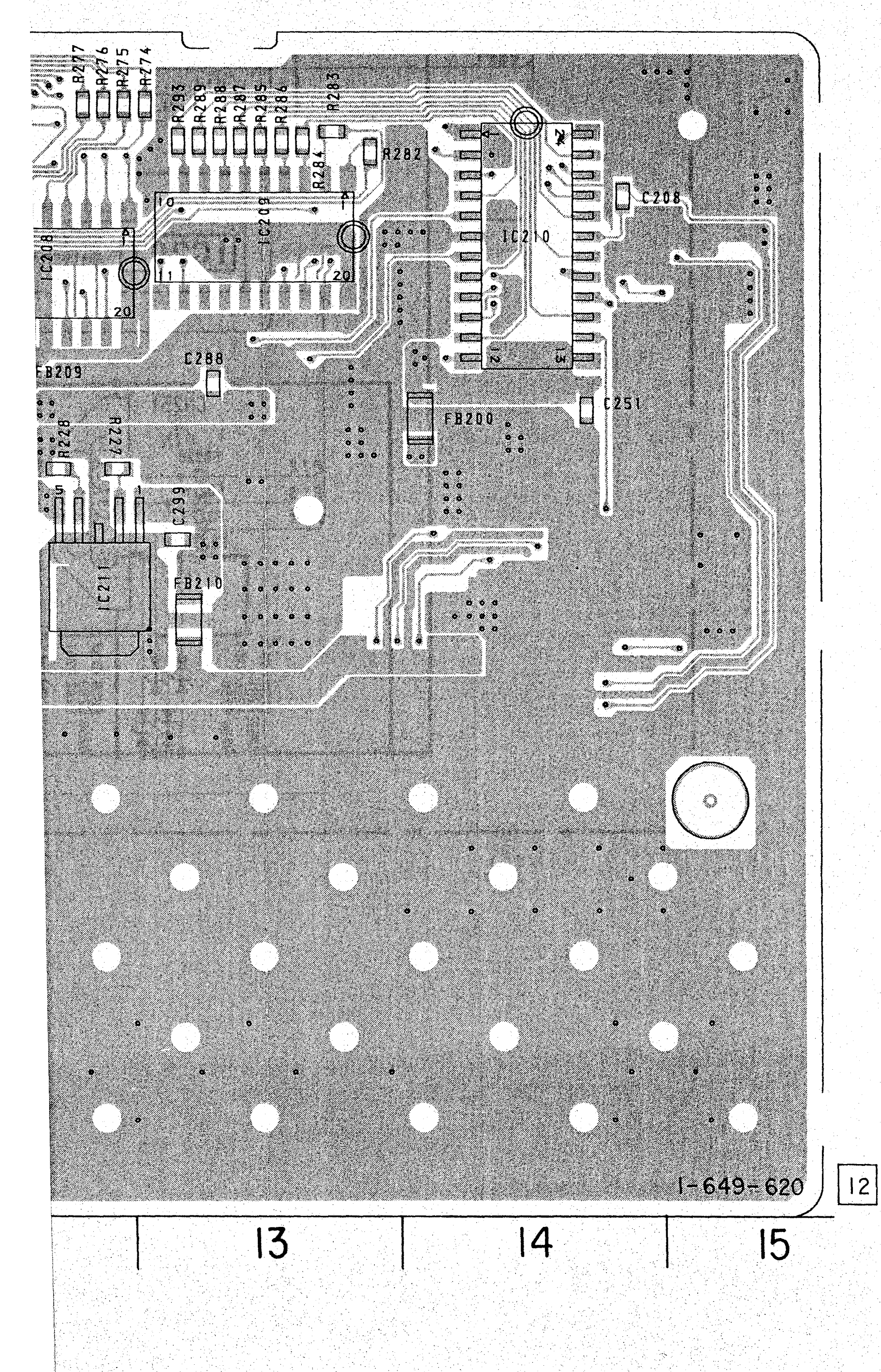
CN101	A-9
CN102	E-4
CN103	D-10
CN104	A-9
CN105	A-12
IC101	G-1
IC104	D-2
IC105	C-2
IC106	D-5
IC107	G-6
IC191	H-6
IC201	G-7
IC204	D-8
IC205	C-8
IC206	C-10
IC207	G-11
IC208	G-12
IC209	G-13
IC210	G-14
IC211	H-12
IC291	H-12
Q101	G-3
Q102	D-3
Q103	G-3
Q104	G-3
Q105	D-3
Q106	F-3
Q109	D-4
Q110	D-3
Q111	D-4
Q112	C-4
Q113	D-6
Q114	H-6
Q115	G-6
Q200	D-13
Q201	G-8
Q202	D-8
Q203	G-9
Q204	G-9
Q205	D-9
Q206	G-9
Q207	D-13
Q208	D-12
Q209	D-9
Q210	D-9
Q211	C-9
Q212	C-9
Q213	C-11
Q214	H-11
Q215	G-11
Q216	D-12




CN101
CN104
CN105
CN103
FL201
IC106
IC205
IC206
IC204
IC201
IC107
IC191
IC291
IC211
X101
X201
FB201
FB191
FB251
FB291
TP201
TP202
TP203
TP204
Q202
Q205
Q206
Q208
Q209
Q210
Q211
Q213
Q214
Q215
Q216
Q201
Q203
Q204
Q114
Q115
L201
L202
L203
L204
L205
L206
L207
L208
L107
C812
C811
C813
C814
5
6
7
8
9
10
11
12


CN101
CN104
CN105
CN102
CN103
FL201
IC106
IC201
IC206
IC207
IC291
X201
TP201
TP202
TP203
TP204
5
6
7
8
9
10
11
12


C297
C298
C225
C285
FB204
C287
L208
R223
C284
R200
C224
R225
Q208
R221
Q207
Q200
C282
R218
C286
C250
C201
C209
Q216
R226
C283
R224
R222
R220
R219
R217
C202
C289
R294
R280
C203
C207
C204
C290
C295
C205
R278
R295
C296
C206
R273
R272
R271
1-649-620
12


R277
R276
R275
R274
R293
R289
R288
R287
R285
R286
R283
R284
R282
C208
IC210
IC209
IC208
FB209
C288
C251
FB200
R228
R227
C299
IC211
FB210
1-649-620
12

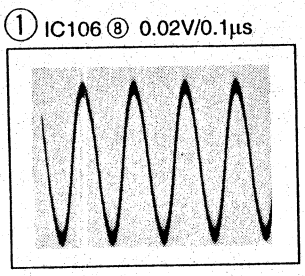
13 14 15

VI-126 (VIDEO INPUT) SCHEMATIC DIAGRAM

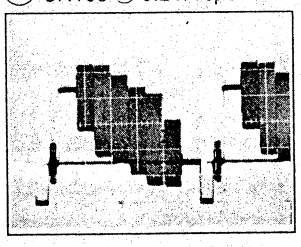
– Ref No. VI-126 BOARD : 6,000 Seriese –

VI-126 Board

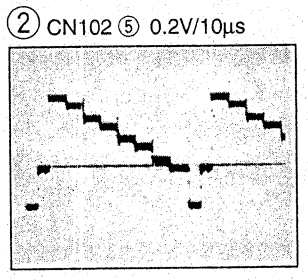
① IC106 ⑧ 0.02V/0.1µs



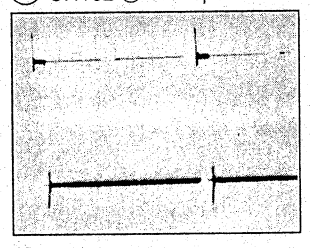
⑥ CN103 ⑳ 0.2V/10µs



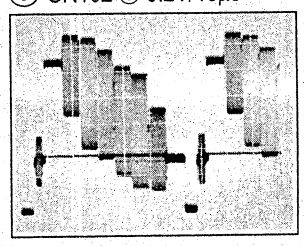
② CN102 ⑤ 0.2V/10µs



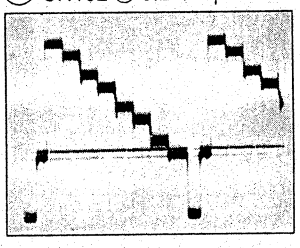
⑦ CN102 ⑬ 1V/10µs



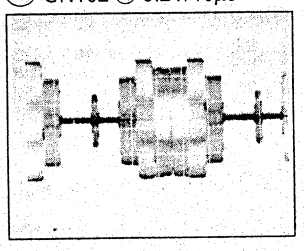
③ CN102 ③ 0.2V/10µs



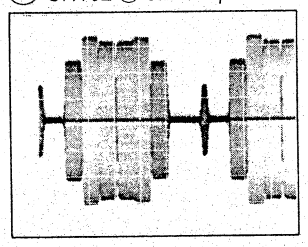
⑧ CN102 ⑪ 0.2V/10µs



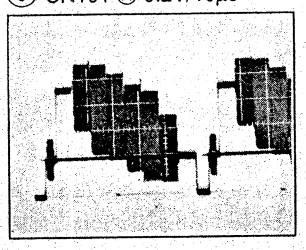
④ CN102 ⑦ 0.2V/10µs



⑨ CN102 ⑯ 0.2V/10µs

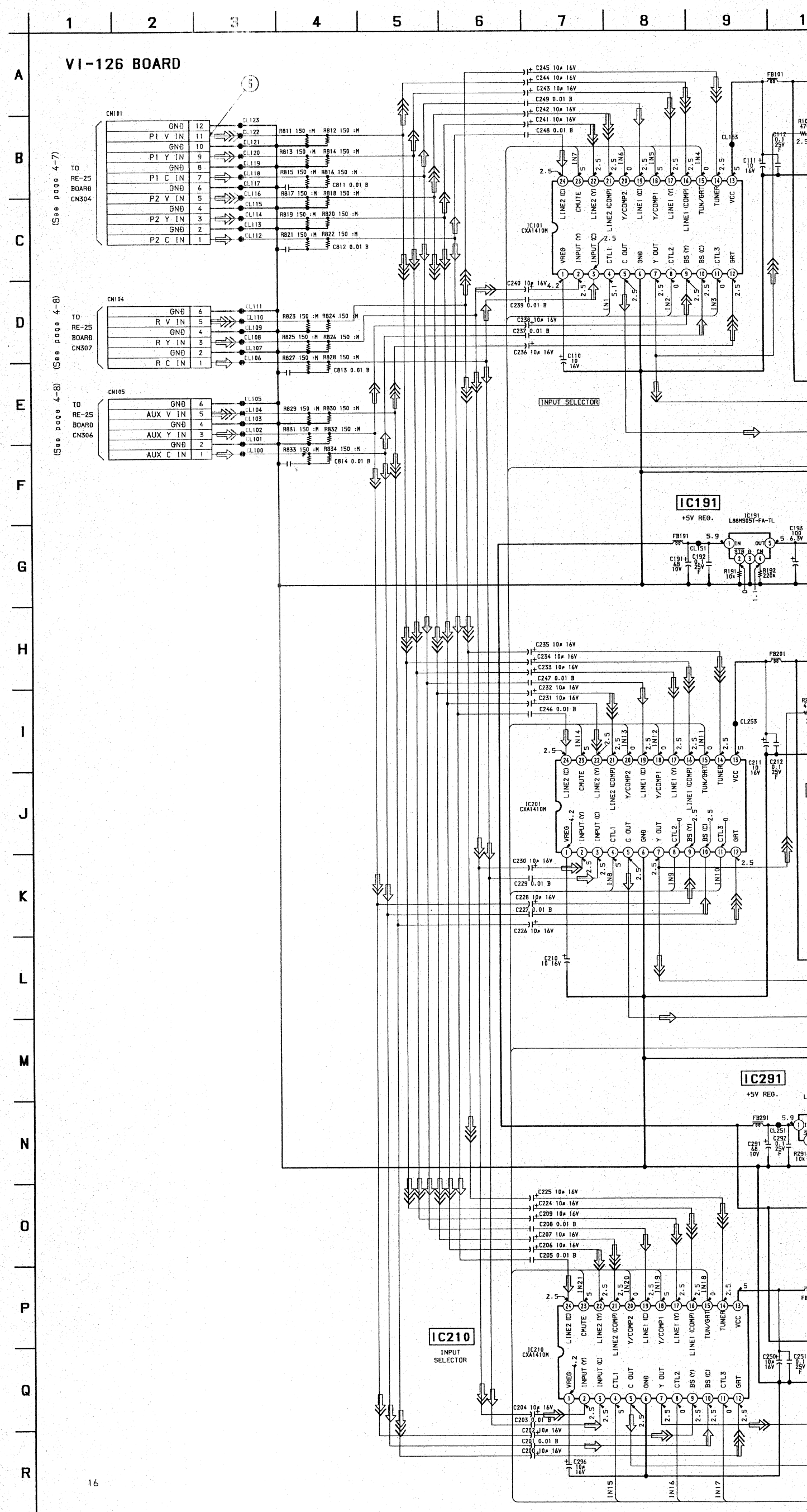


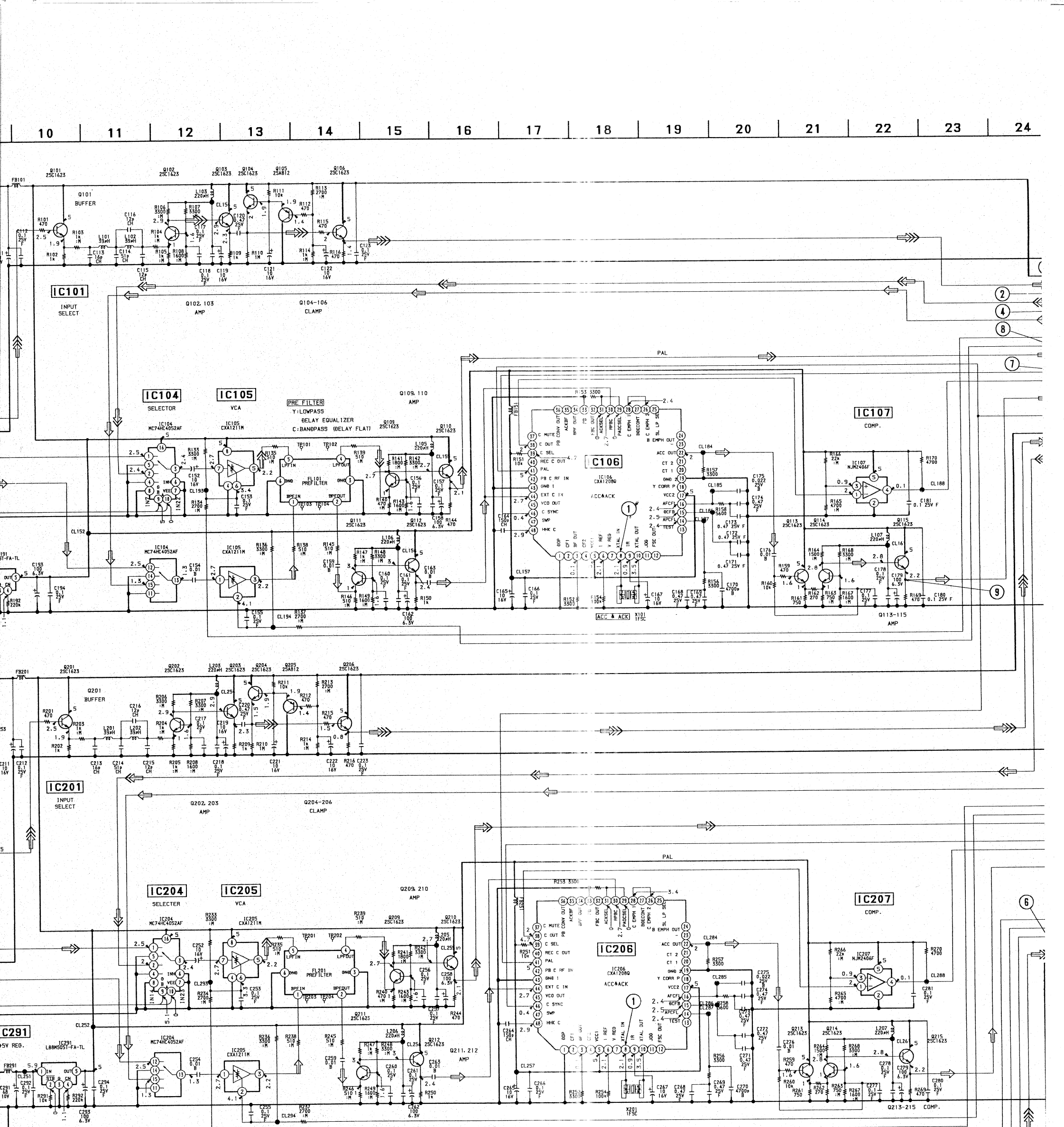
⑤ CN101 ⑪ 0.2V/10µs



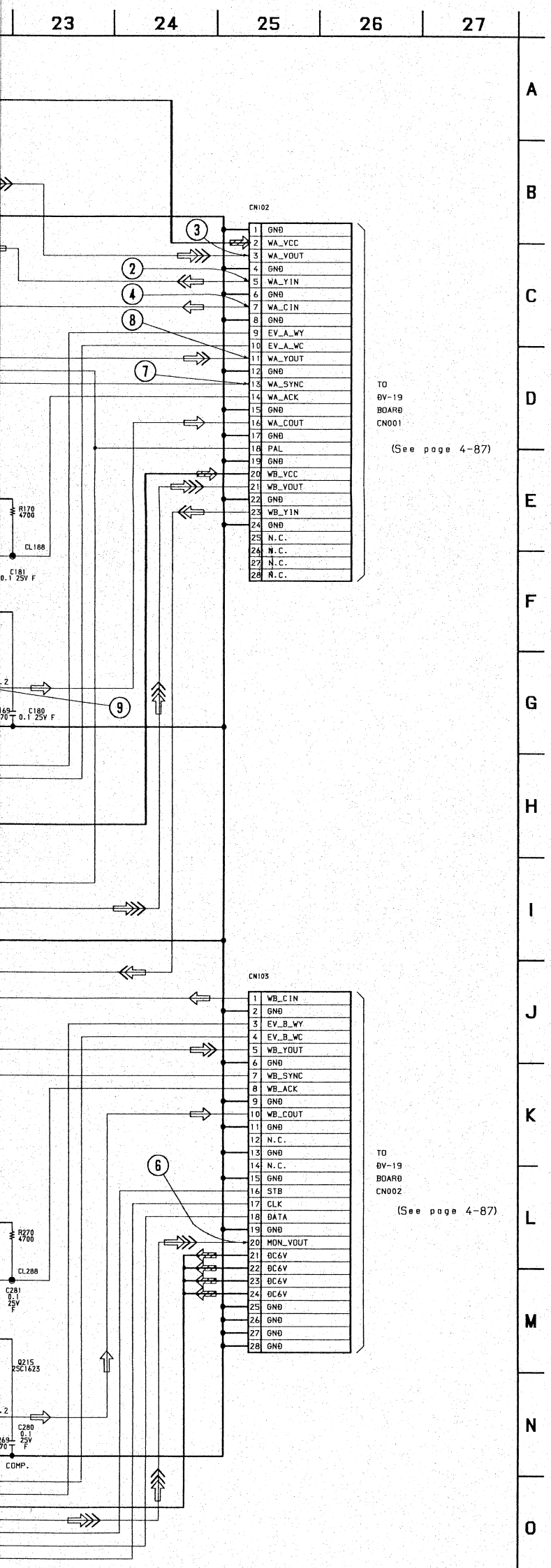
• **SIGNAL PATH (ANALOG)**

VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
⇨	⇨	⇨	




10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
IC101
INPUT SELECT
Q101 BUFFER
Q102, 103 AMP
Q104–106 CLAMP
IC104
SELECTOR
IC105
VCA
PRE FILTER
Y:LOWPASS
DELAY EQUALIZER
C:BANDPASS (DELAY FLAT)
Q109, 110 AMP
PAL
IC107
COMP.
IC106
ACC&ACK
ACC & ACK
X101 1FSC
Q113–115 AMP
IC201
INPUT SELECT
Q202, 203 AMP
Q204–206 CLAMP
IC204
SELECTER
IC205
VCA
Q209, 210 AMP
IC206
ACC&ACK
IC207
COMP.
X201 1FSC
Q213–215 COMP.
IC291
+5V REG.
IC211
+5V REG.
Q200 BUFFER
Q207 BUFFER
Q208, 216 Y&C MIXER
IC208 IC209
ADDRESS DECODER (SERIAL TO PARALLEL)
IC208 CX7991
IC209 CX7991
(STB)
(DATA)
(CLK)

8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23


23
24
25
26
27
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
CN102
1 GND
2 WA_VCC
3 WA_VOUT
4 GND
5 WA_YIN
6 GND
7 WA_CIN
8 GND
9 EV_A_WY
10 EV_A_WC
11 WA_YOUT
12 GND
13 WA_SYNC
14 WA_ACK
15 GND
16 WA_COUT
17 GND
18 PAL
19 GND
20 WB_VCC
21 WB_VOUT
22 GND
23 WB_YIN
24 GND
25 N.C.
26 N.C.
27 N.C.
28 N.C.
TO
DV-19
BOARD
CN001
(See page 4-87)
CN103
1 WB_CIN
2 GND
3 EV_B_WY
4 EV_B_WC
5 WB_YOUT
6 GND
7 WB_SYNC
8 WB_ACK
9 GND
10 WB_COUT
11 GND
12 N.C.
13 GND
14 N.C.
15 GND
16 STB
17 CLK
18 DATA
19 GND
20 MON_VOUT
21 DC6V
22 DC6V
23 DC6V
24 DC6V
25 GND
26 GND
27 GND
28 GND
TO
DV-19
BOARD
CN002
(See page 4-87)
R170 4700
CL168
C181 0.1 25V F
C180 0.1 25V F
R270 4700
CL288
C281 0.1 25V F
Q215 2SC1623
C280 0.1 25V F
COMP.
9
8
7
6
4
2

VIDEO IN

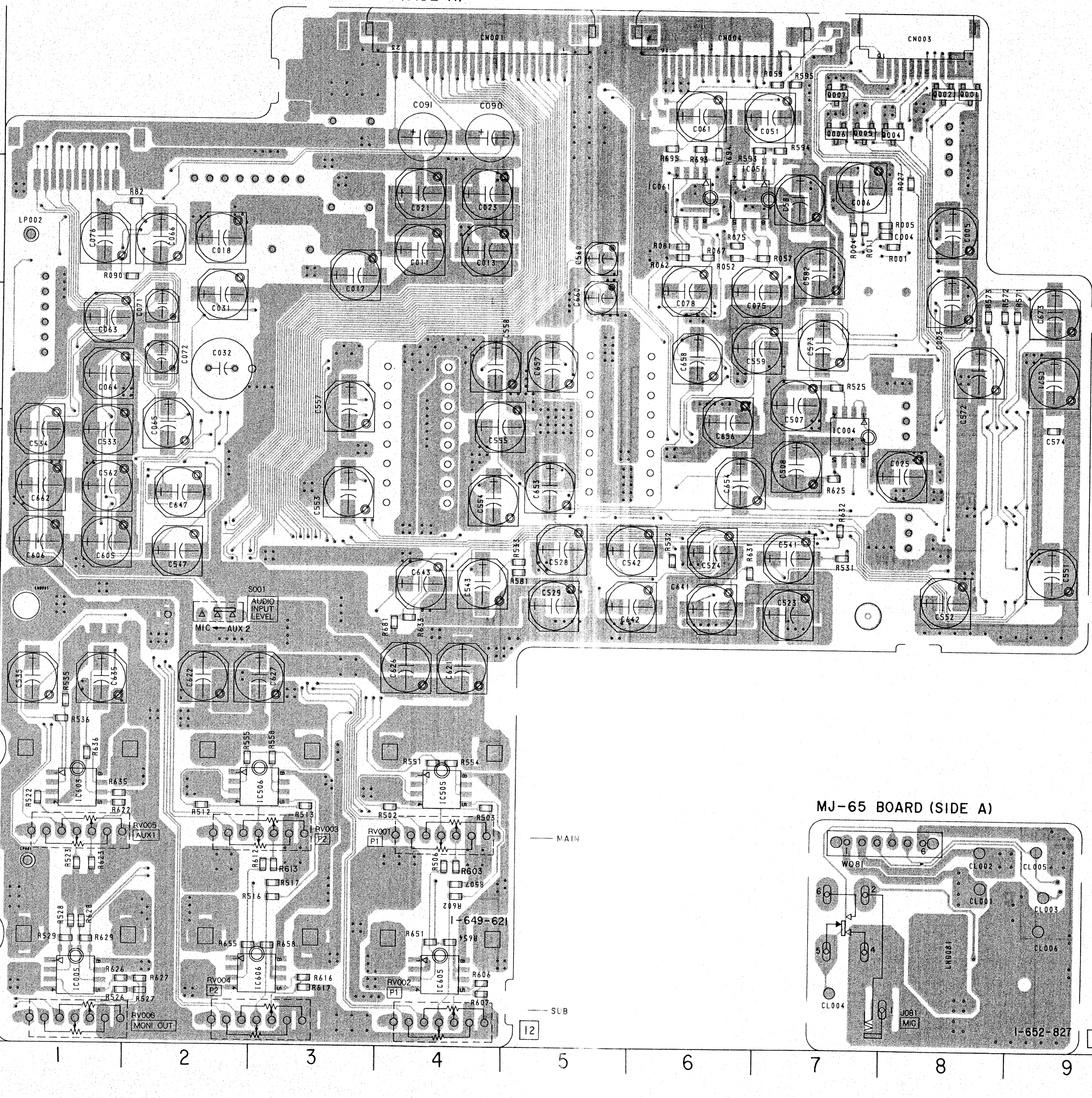
AM-32 BOARD

CN001	A-4	IC004	D-7	IC616	E-15
CN002	A-18	IC005	H-1	IC620	D-18
CN003	A-8	IC051	B-6		
CN004	A-6	IC061	B-6	Q001	A-8
CN005	B-17	IC071	B-18	Q002	A-8
CN006	A-11	IC072	B-18	Q003	A-12
CN007	B-18	IC505	F-4	Q004	A-7
		IC506	F-3	Q005	A-7
D031	C-17	IC507	E-13	Q006	A-7
D032	C-17	IC509	E-14	Q007	A-7
D501	D-10	IC510	E-11	Q031	C-17
D502	E-10	IC511	D-11	Q051	B-13
D503	D-10	IC512	D-15	Q052	B-13
D504	C-10	IC513	C-14	Q061	B-13
D505	C-10	IC515	D-18	Q062	B-13
D601	C-10	IC516	E-15	Q071	C-18
D602	D-10	IC518	C-11	Q072	C-18
D603	D-10	IC519	D-18		
		IC520	D-18		
IC001	C-12	IC603	F-1		
IC002	C-12	IC605	H-4		
IC003	D-12	IC606	H-3		

AM-32 (AUDIO) /MJ-65 (MIC JACK) /AS-46 (VOLUME) PRINTED WIRING BOARD

– Ref No. AM-32 BOARD : 1,000/MJ-65 BOARD : 3,000/AS-46 BOARD : 1,000 Seriese –

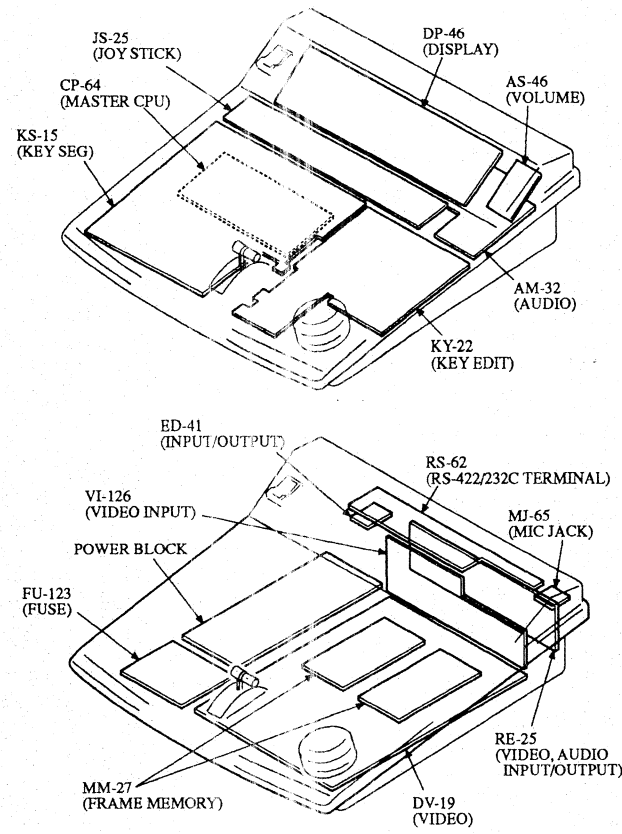
AM-32 BOARD (SIDE A)



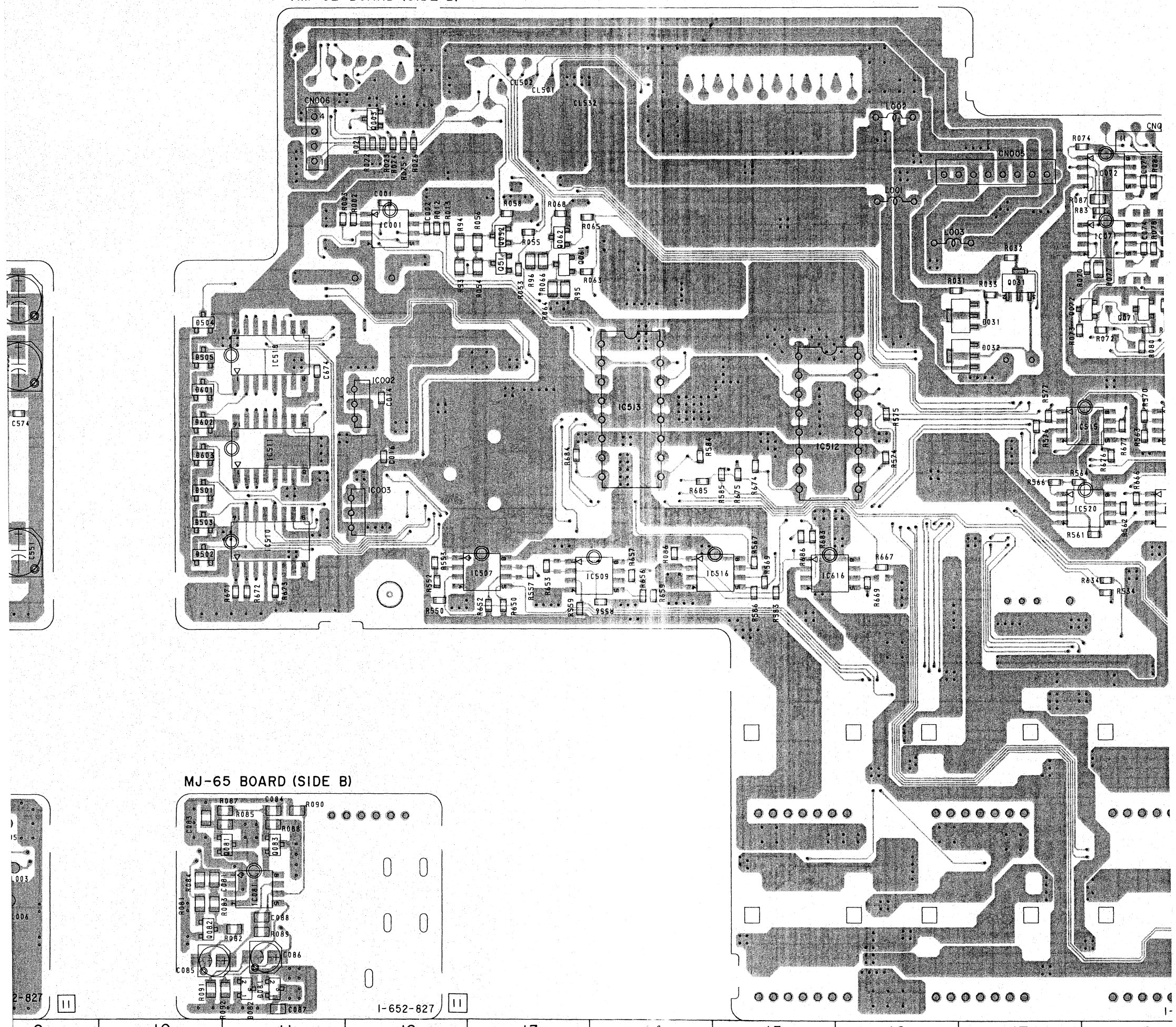
MJ-65 BOARD (SIDE A)

MJ-65 BOARD

D081	H-11
D082	H-11
IC081	G-11
Q081	G-11
Q082	H-10
Q083	G-11
W081	G-7



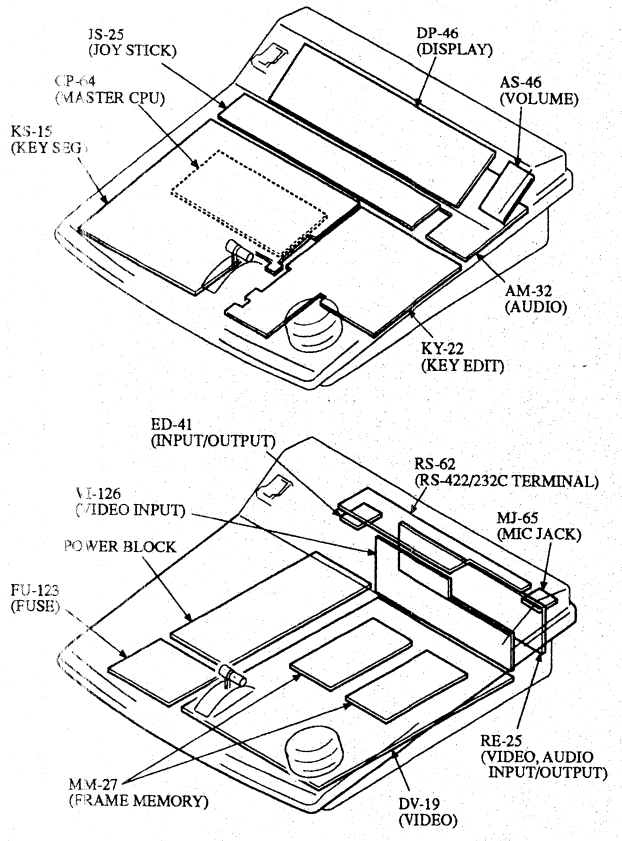
AM-32 BOARD (SIDE B)



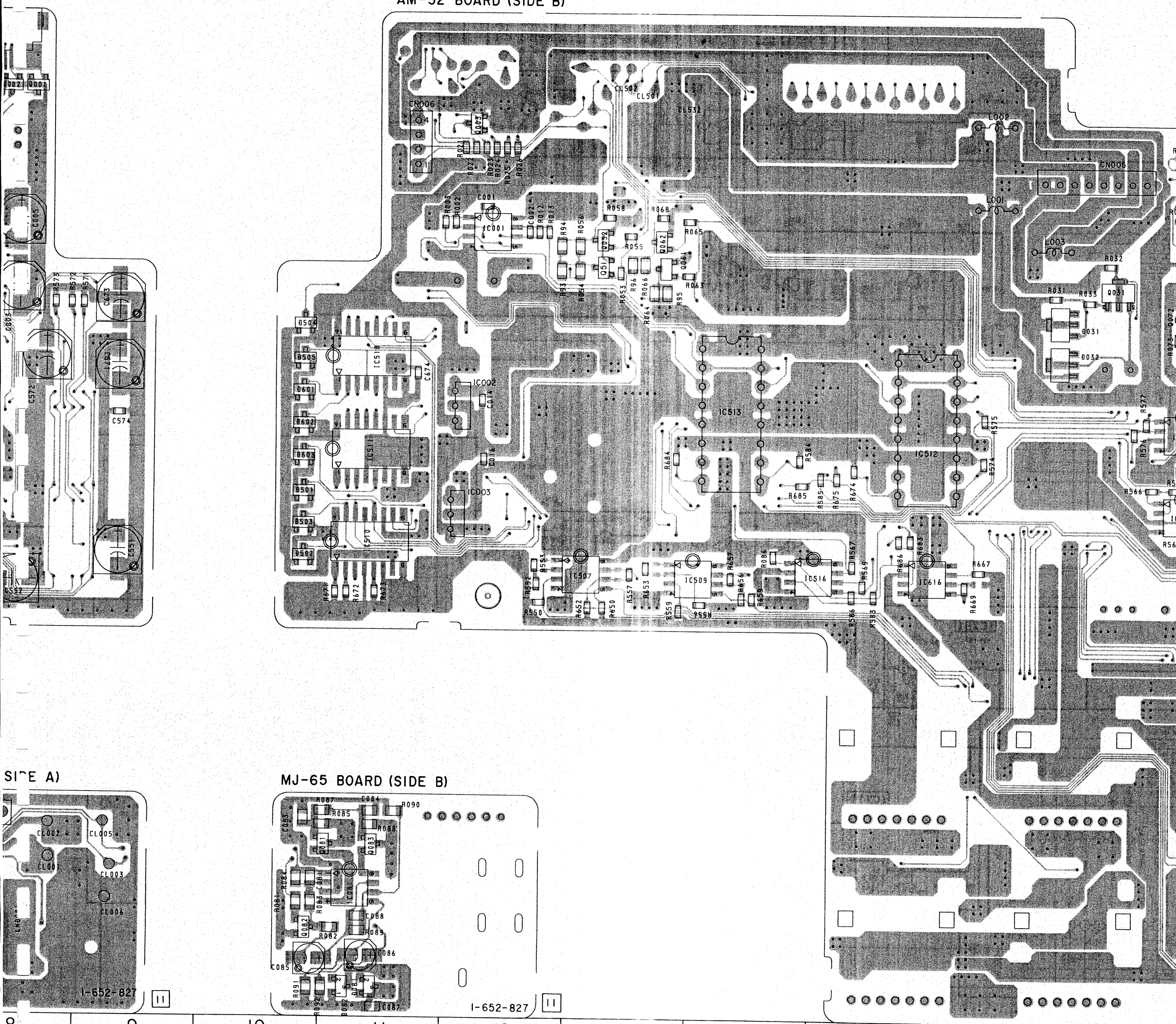
MJ-65 BOARD (SIDE B)

MJ-65 BOARD

IC616	E-15	D081	H-11
IC620	D-18	D082	H-11
Q001	A-8	IC081	G-11
Q002	A-8		
Q003	A-12	Q081	G-11
Q004	A-7	Q082	H-10
Q005	A-7	Q083	G-11
Q006	A-7		
Q007	A-7	W081	G-7
Q031	C-17		
Q051	B-13		
Q052	B-13		
Q061	B-13		
Q062	B-13		
Q071	C-18		
Q072	C-18		



AM-32 BOARD (SIDE B)

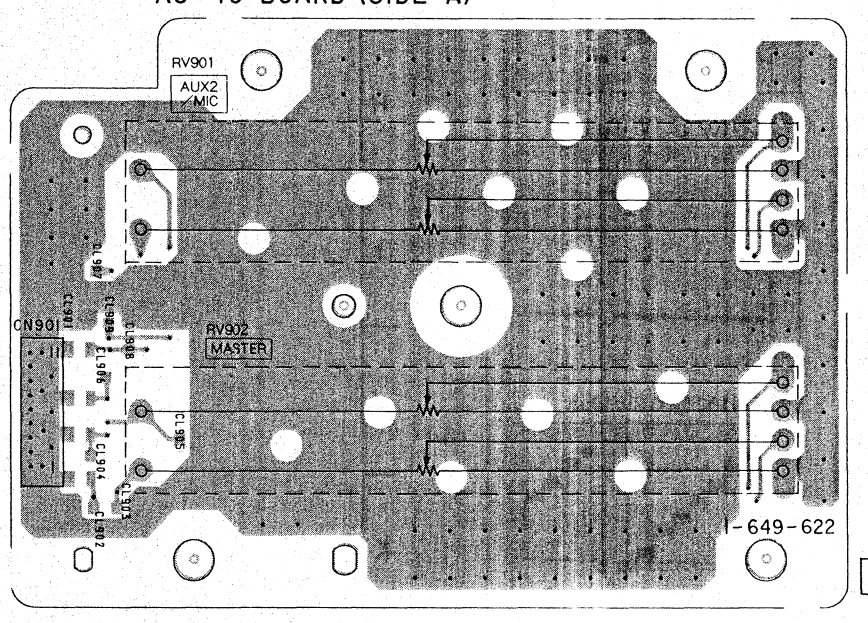


MJ-65 BOARD (SIDE A)

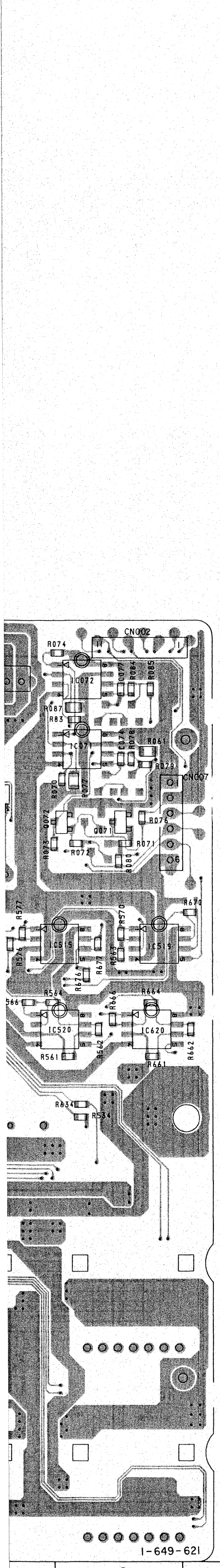
MJ-65 BOARD (SIDE B)

8 9 10 11 12 13 14 15 16 17

AS-46 BOARD (SIDE A)



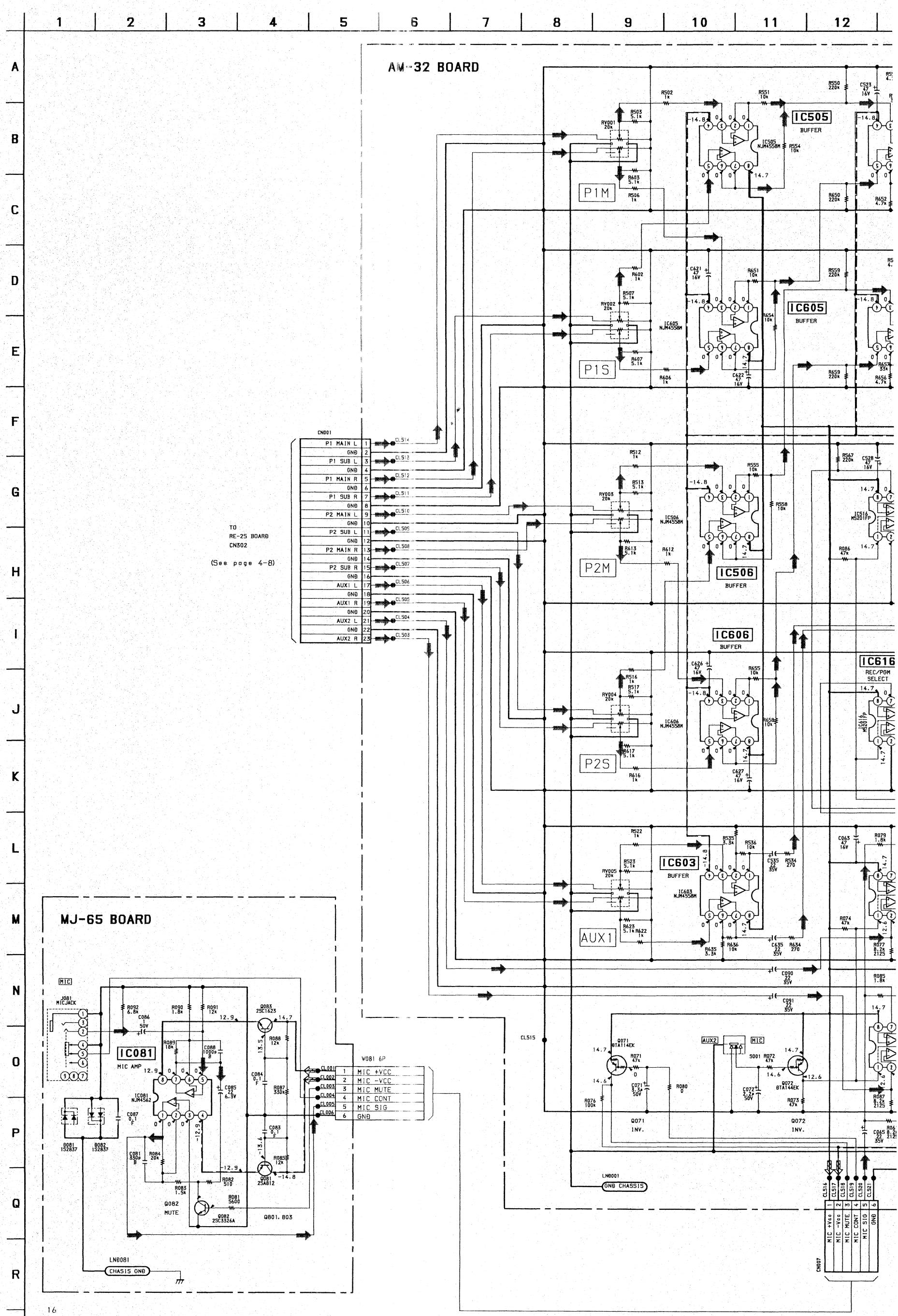
AS-46 BOARD (SIDE B)



18 19 20 21 22 23

AM-32 (AUDIO) /MJ-65 (MIC JACK) /AS-46 (VOLUME) SCHEMATIC DIAGRAM

– Ref No. AM-32 BOARD : 1,000/ MJ-65 BOARD : 3,000/ AS-46 BOARD : 1,000 Seriese –



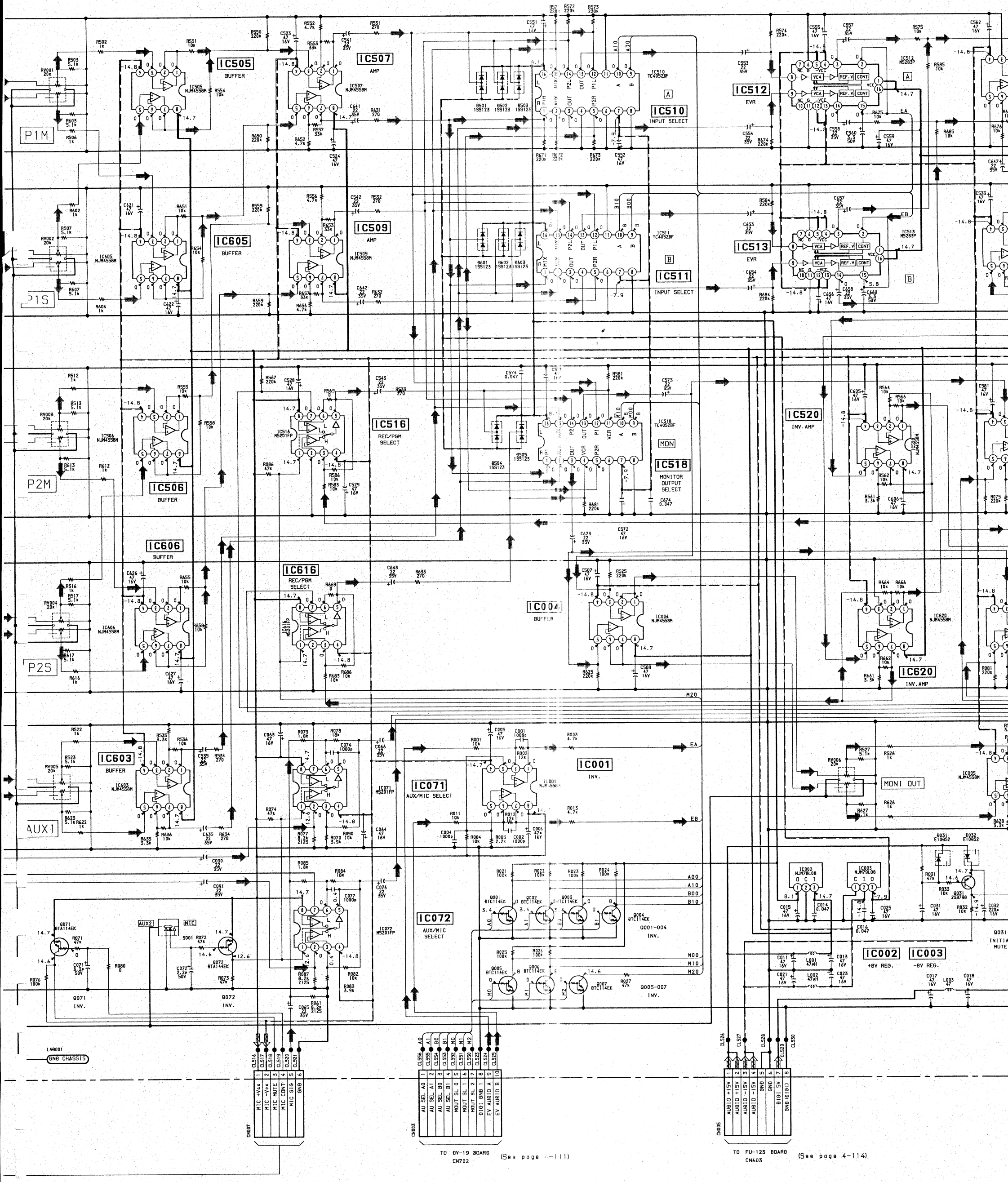
(ANALOG)

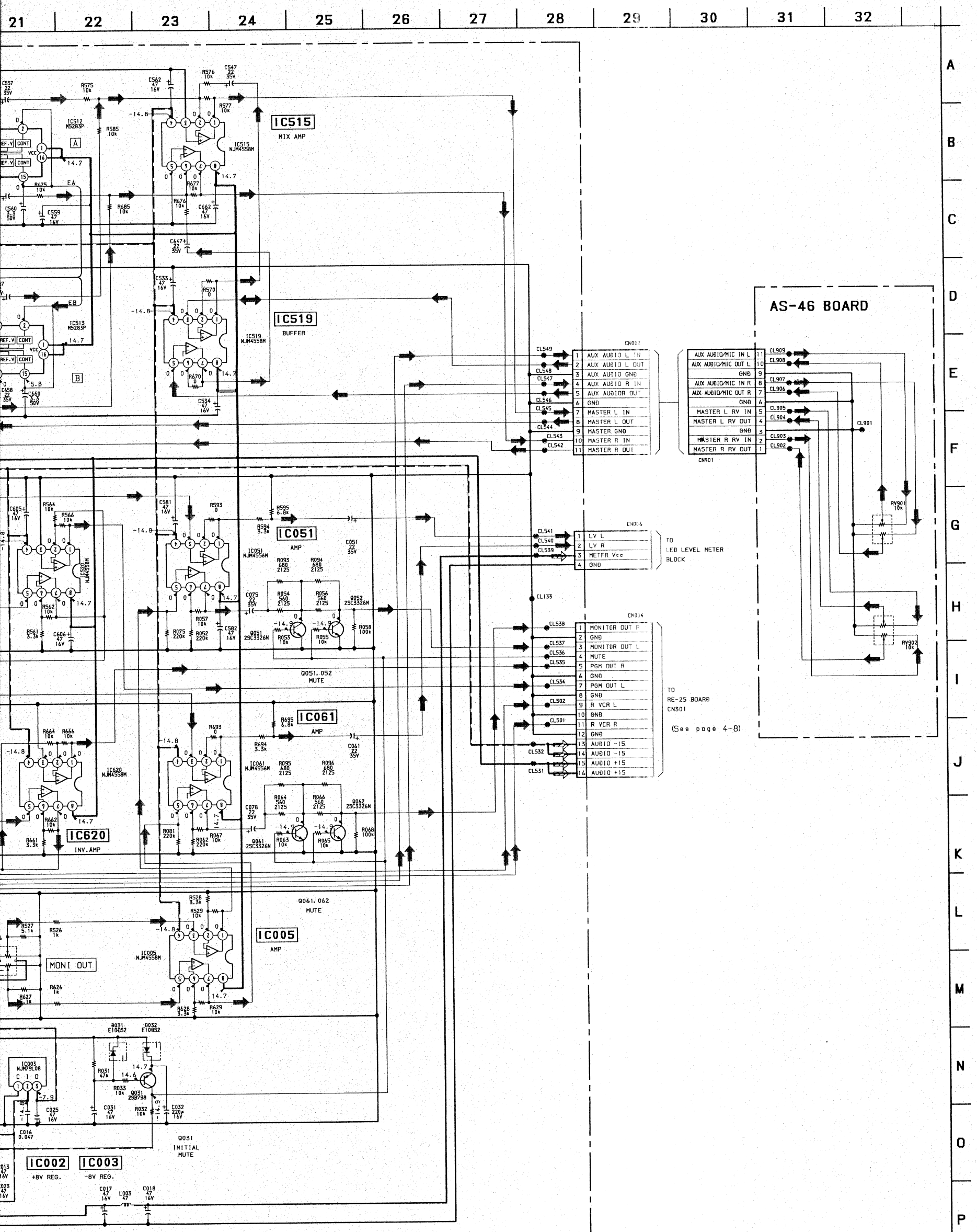
SIGNAL		AUDIO SIGNAL
	Y/CHROMA	
		➡

IC505 BUFFER
IC507 AMP
IC510 TC4052BF INPUT SELECT
IC512 EVR
IC605 BUFFER
IC509 AMP
IC511 TC4052BF INPUT SELECT
IC513 EVR
IC506 BUFFER
IC516 M5201FP REC/PGM SELECT
IC518 TC4052BF MONITOR OUTPUT SELECT
IC520 INV. AMP
IC606 BUFFER
IC616 M5201FP REC/PGM SELECT
IC004 BUFFER
IC620 INV. AMP
IC603 BUFFER
IC071 M5201FP AUX/MIC SELECT
IC001 INV.
IC072 AUX/MIC SELECT
Q001-004 INV.
Q005-007 INV.
IC002 +8V REG.
IC003 -8V REG.
Q031 INITIAL MUTE
MONI OUT

CN007 MIC +Vcc, MIC -Vcc, MIC MUTE, MIC CONT, MIC SIG, GND
CN003 AU SEL A0, AU SEL A1, AU SEL B0, AU SEL B1, MOUT SL 0, MOUT SL 1, MOUT SL 2, B101 GND 1, EV AUDIO A, EV AUDIO B
CN005 AUDIO +15V, AUDIO +15V, AUDIO -15V, AUDIO -15V, GND, GND, B101 5V, GND (B101)

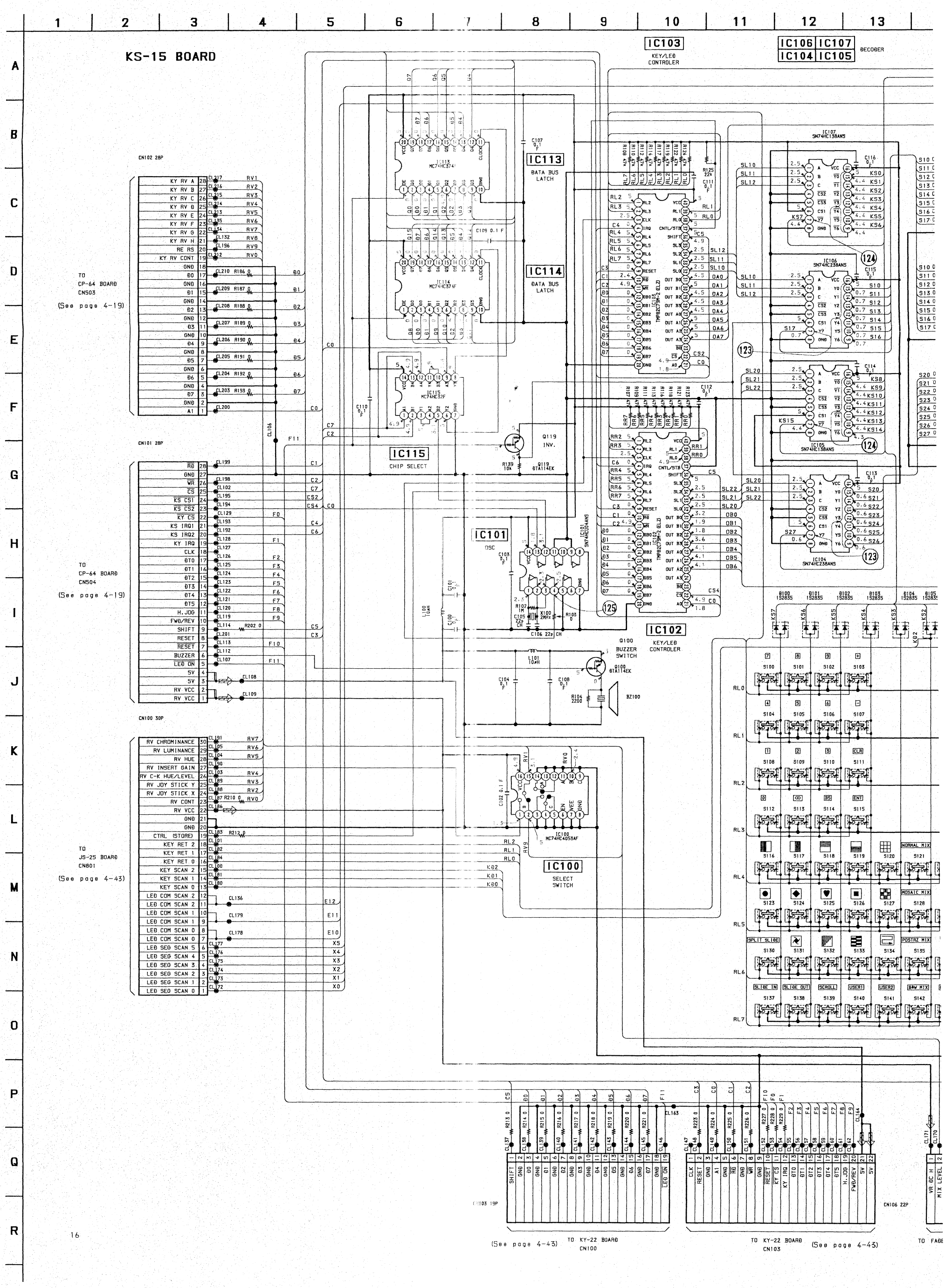
TO 8V-19 BOARD CN702 (See page 4-111)
TO FU-123 BOARD CN603 (See page 4-114)


P1M
P1S
P2M
P2S
AUX1
IC505 BUFFER
IC507 AMP
IC605 BUFFER
IC509 AMP
IC510 INPUT SELECT
IC511 INPUT SELECT
IC512 EVR
IC513 EVR
IC506 BUFFER
IC606 BUFFER
IC616 REC/PGM SELECT
IC004 BUFFER
IC516 REC/PGM SELECT
IC518 MONITOR OUTPUT SELECT
IC520 INV. AMP
IC620 INV. AMP
IC603 BUFFER
IC071 AUX/MIC SELECT
IC001 INV.
IC072 AUX/MIC SELECT
Q001-004 INV.
Q005-007 INV.
Q071 INV.
Q072 INV.
IC002 +8V REG.
IC003 -8V REG.
MONI OUT
MON
M20
EA
EB
AUX2
MIC
LNB001
GND CHASSIS
CN007
CN003
CN005
TO BV-19 BOARD CN702
(See page 4-111)
TO FU-123 BOARD CN603
(See page 4-114)


21
22
23
24
25
26
27
28
29
30
31
32
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
IC515
MIX AMP
IC519
BUFFER
IC051
AMP
IC061
AMP
IC620
INV. AMP
IC005
AMP
IC002
+8V REG.
IC003
-8V REG.
Q051, 052
MUTE
Q061, 062
MUTE
Q031
INITIAL
MUTE
MONI OUT
AS-46 BOARD
CN002
CL549
CL548
CL547
CL546
CL545
CL544
CL543
CL542
1 AUX AUDIO L IN
2 AUX AUDIO L OUT
3 AUX AUDIO GND
4 AUX AUDIO R IN
5 AUX AUDIOR OUT
6 GND
7 MASTER L IN
8 MASTER L OUT
9 MASTER GND
10 MASTER R IN
11 MASTER R OUT
CN901
AUX AUDIO/MIC IN L 11
AUX AUDIO/MIC OUT L 10
GND 9
AUX AUDIO/MIC IN R 8
AUX AUDIO/MIC OUT R 7
GND 6
MASTER L RV IN 5
MASTER L RV OUT 4
GND 3
MASTER R RV IN 2
MASTER R RV OUT 1
CL909
CL908
CL907
CL906
CL905
CL904
CL903
CL902
CL901
RV901 10k
RV902 10k
CN005
CL541
CL540
CL539
1 LV L
2 LV R
3 METER Vcc
4 GND
TO
LEVEL METER
BLOCK
CL133
CN004
CL538
CL537
CL536
CL535
CL534
CL502
CL501
CL532
CL531
1 MONITOR OUT R
2 GND
3 MONITOR OUT L
4 MUTE
5 PGM OUT R
6 GND
7 PGM OUT L
8 GND
9 R VCR L
10 GND
11 R VCR R
12 GND
13 AUDIO -15
14 AUDIO -15
15 AUDIO +15
16 AUDIO +15
TO
RE-25 BOARD
CN301
(See page 4-8)

KS-15 (KEY SEG) SCHEMATIC DIAGRAM

– Ref No. KS-15 BOARD : 3,000 Seriese –



07
05

DECODER

Q103, 105, 107, 109, 111, 113, 115, 117
LED SWITCH

CN105 6P
1 LED 5V
2 LED 5V
3 LED 5V
4 LED GND
5 LED GND
6 LED GND

TO FU-123 BOARD CN608

(See page

LN0105
LN0106
LN0107

TRANSRATE

IC109
IC110
IC111
INV. DRIVER

IC112
INV. DRIVER

IC108
INV. DRIVER

Q106, 108, 110, 112, 114, 116, 118
LED SWITCH

EFFECT TRANSITION

COLOR BACKGROUND

TRANSRATE

CN106 22P

CN104 3P

TO FADER UNIT

(See page 4-43)

IC107
IC105
DECODER

Q103. 105. 107. 109. 111. 113. 115. 117
LED SWITCH

CN105 6P
1 LED 5V
2 LED 5V
3 LED 5V
4 LED GND
5 LED GND
6 LED GND
TO FU-123 BOA CN608 (Se

TRANSRATE
VIDEO/AUDIO/FADE
T-TIME 100
T-TIME 10
T-TIME 1
WHITE FADE
LEVER PAUSE
BLACK FADE
REVERSE
AUTO TRANS / PAUSE
CUT
INPUT EFFECT
AUDIO FOLLOW
A-P1
A-P2
A-AUX
BKGD
B-P1
B-P2
B-AUX

IC109
IC110
IC111
INV. DRIVER

IC112
INV. DRIVER

IC108
INV. DRIVER

LUMINA CLIP TRANS
LUMINA KEY
CHROMA KEY
NORMAL MIX
MOSAIC MIX
POSTRZ MIX
B&W MIX
P IN P
USER2
USER1
SCROLL
SLIDE OUT
SPLIT SLIDE
SLIDE IN

Q104. 106. 108. 110. 112. 114. 116. 118
LED SWITCH

EFFECT TRANSITION
VIDEO
FADE
AUDIO
COLOR BACKGROUND
AUTO TRANS

LA-301YL

CN106 22P
H. JOG
FWD/REV
5V
5V

CN104 3P
VR DC H
MIX LEVEL
VR DC L

TO FADER UNIT

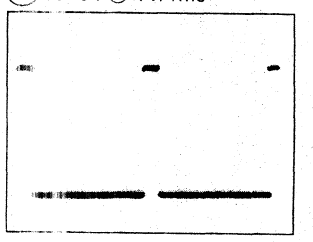
(Se page 4-43)

A B C D E F G H I J K L M N O P Q R

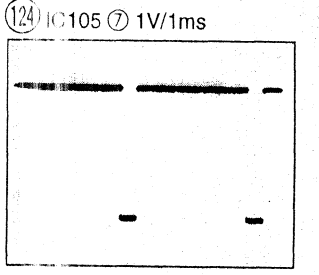
TO
FU-123 BOARD
CN608
(See page 4-114)

KS-15 board

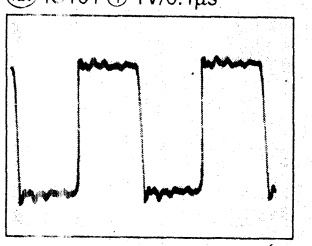
(123) IC104 ⑦ 1V/1ms



(124) IC105 ⑦ 1V/1ms



(125) IC101 ④ 1V/0.1µs

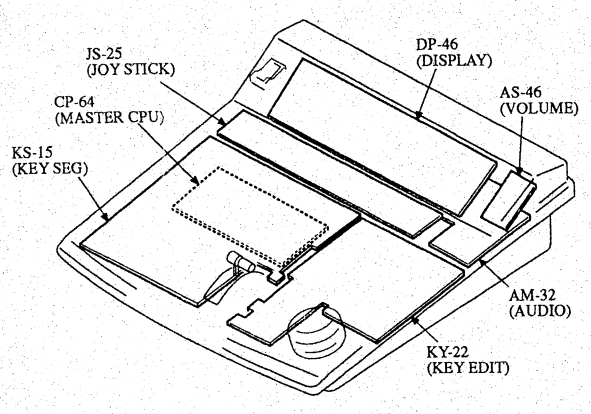


KS-15 (KEY SEG) PRINTED WIRING BOARD

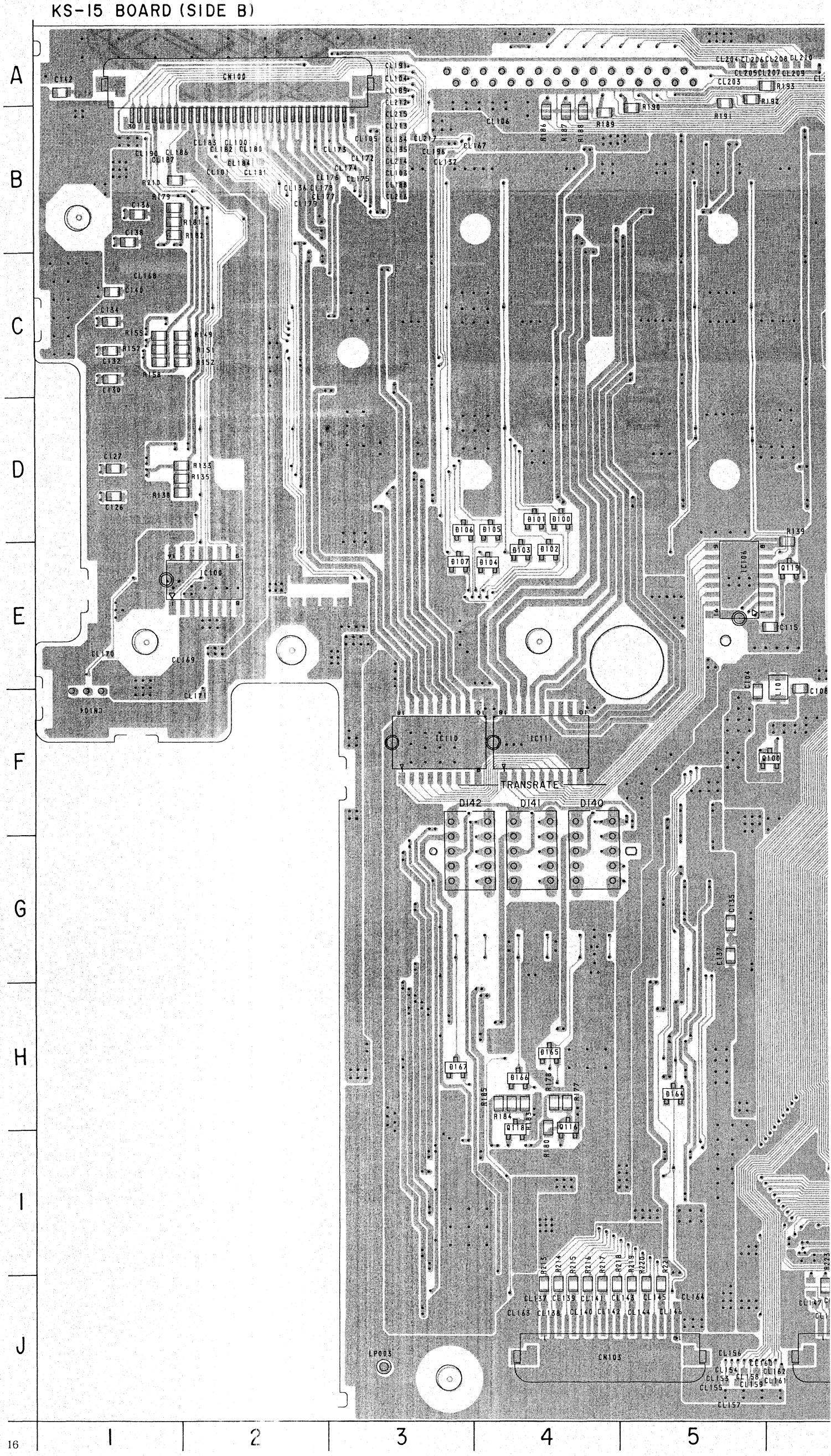
– Ref No. KS-15 BOARD : 3,000 Seriese –

KS-15 BOARD

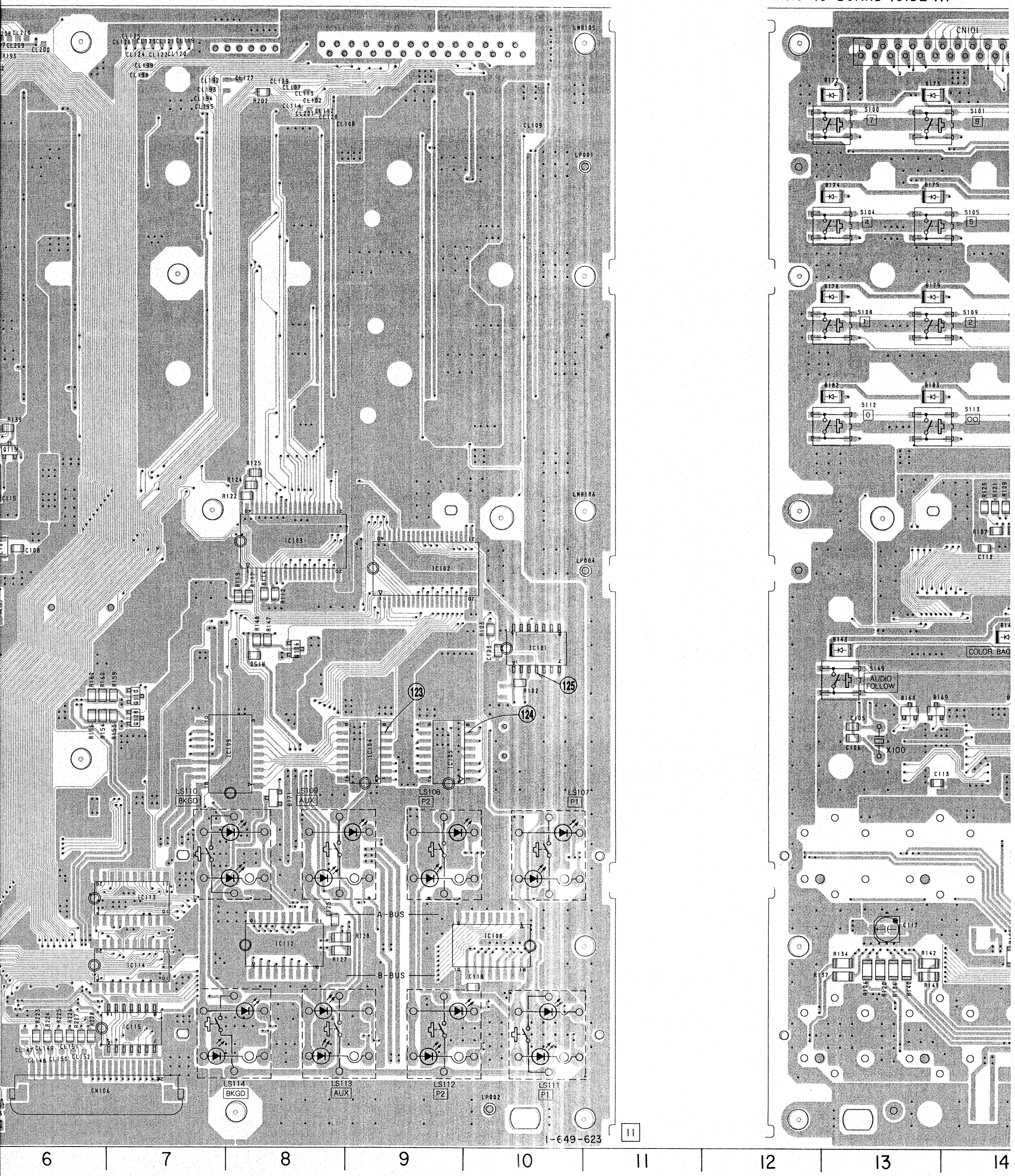
CN100	A-2	D190	C-21
CN101	A-14	D191	C-21
CN102	A-18	D192	C-21
CN103	J-4	D193	C-21
CN104	F-22	D194	D-21
CN105	A-15	D195	D-21
CN106	J-6	D196	B-20
		D197	B-20
D100	D-4	D198	C-20
D101	D-4	D199	D-20
D102	E-4	D200	B-19
D103	E-4	D201	B-19
D104	E-4	D202	C-19
D105	D-4	D203	D-19
D106	D-3	D204	B-18
D107	E-7	D205	C-18
D108	B-14	D206	C-18
D109	B-15	D207	D-18
D140	F-4	D208	B-17
D141	F-4	D209	B-17
D142	F-3	D210	C-17
D143	F-13	D211	D-17
D144	F-14	D212	B-16
D147	F-17	D213	C-16
D148	F-18	D214	C-16
D149	G-17	D215	D-16
D150	G-18		
D151	G-17	IC100	E-1
D152	G-18	IC101	F-10
D153	J-19	IC102	F-9
D154	G-20	IC103	E-8
D155	G-20	IC104	G-9
D156	G-20	IC105	G-9
D157	H-20	IC106	E-5
D158	H-20	IC107	E-19
D159	H-20	IC108	I-10
D160	I-20	IC109	G-7
D161	I-20	IC110	F-3
D162	I-20	IC111	F-4
D163	J-20	IC112	I-8
D164	H-5	IC113	H-7
D165	H-4	IC114	I-7
D166	H-4	IC115	J-7
D167	H-3		
D168	G-13	Q100	F-6
D169	G-13	Q103	D-22
D170	G-14	Q105	D-22
D171	H-8	Q106	F-8
D172	B-13	Q107	C-22
D173	B-13	Q108	G-7
D174	C-13	Q109	C-22
D175	C-13	Q110	G-7
D176	C-14	Q111	C-22
D177	B-15	Q112	G-17
D178	D-13	Q113	B-22
D179	C-13	Q114	G-17
D180	C-14	Q115	B-22
D181	C-15	Q116	I-4
D182	D-13	Q117	C-22
D183	D-13	Q118	I-4
D184	D-14	Q119	E-6
D185	D-15		
D188	B-21		
D189	B-21		

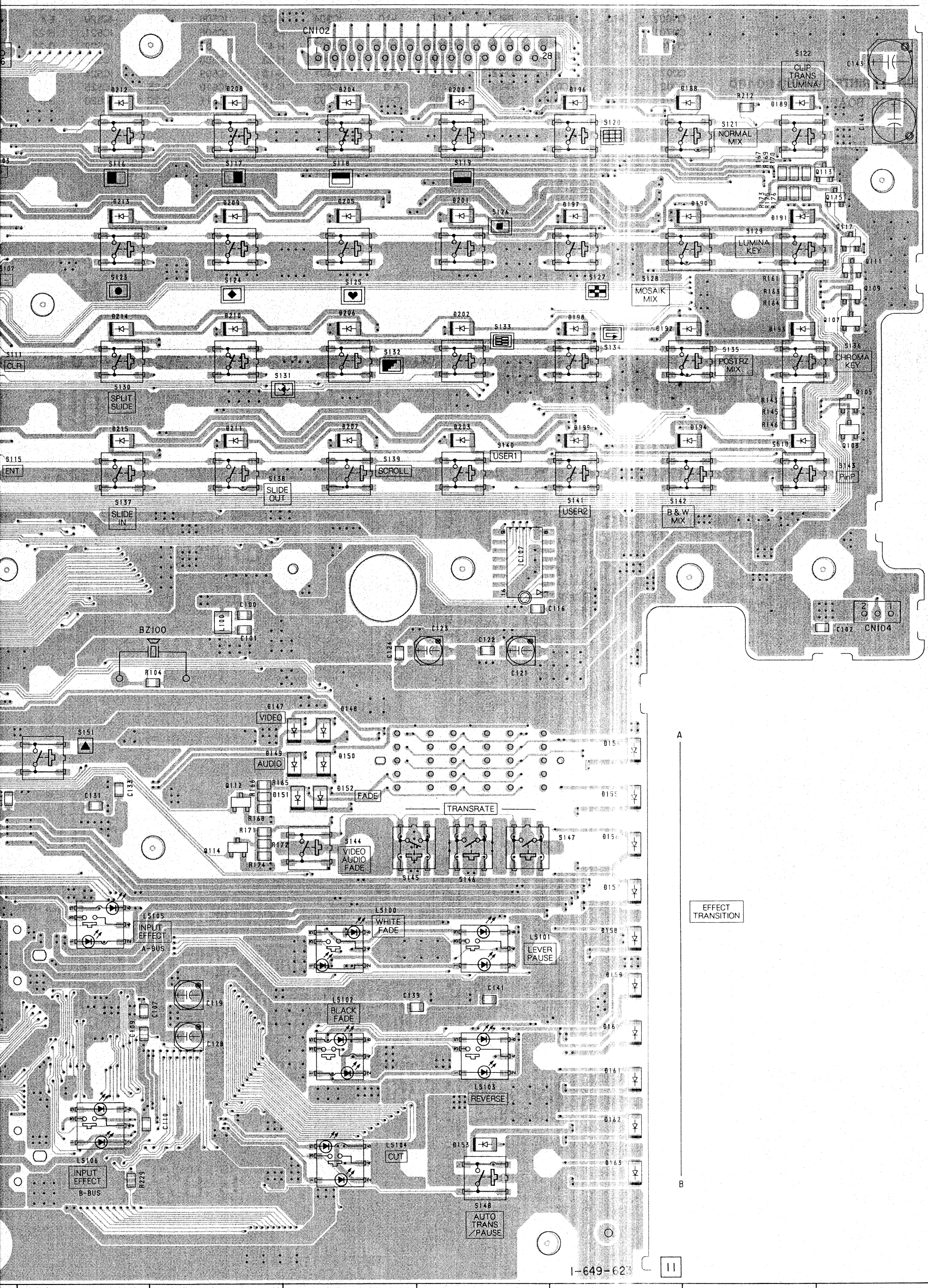


KS-15 BOARD (SIDE B)



KS-15 BOARD (SIDE A)




CN102
1
28
S122
CLIP
TRANS
LUMINA
S121
NORMAL
MIX
S129
LUMINA
KEY
S128
MOSAIK
MIX
S135
POSTRZ
MIX
S136
CHROMA
KEY
S111
CLR
S130
SPLIT
SLIDE
S131
S132
S133
S134
S115
ENT
S137
SLIDE
IN
S138
SLIDE
OUT
S139
SCROLL
S140
USER1
S141
USER2
S142
B&W
MIX
S143
PinP
S610
IC107
C116
C100
C101
C123
C122
C124
C121
CN104
C102
BZ100
R104
VIDEO
AUDIO
FADE
TRANSRATE
S144
VIDEO
AUDIO
FADE
S145
S146
S147
S151
C131
C133
R166
R165
R168
R171
R172
R174
Q112
Q114
INPUT
EFFECT
A-BUS
INPUT
EFFECT
B-BUS
LS105
LS106
LS100
WHITE
FADE
LS101
LEVER
PAUSE
LS102
BLACK
FADE
LS103
REVERSE
LS104
CUT
S148
AUTO
TRANS
/PAUSE
C107
C109
C110
C119
C120
C139
C141
R229
EFFECT
TRANSITION
A
B
I-649-623
11
16
17
18
19
20
21
22

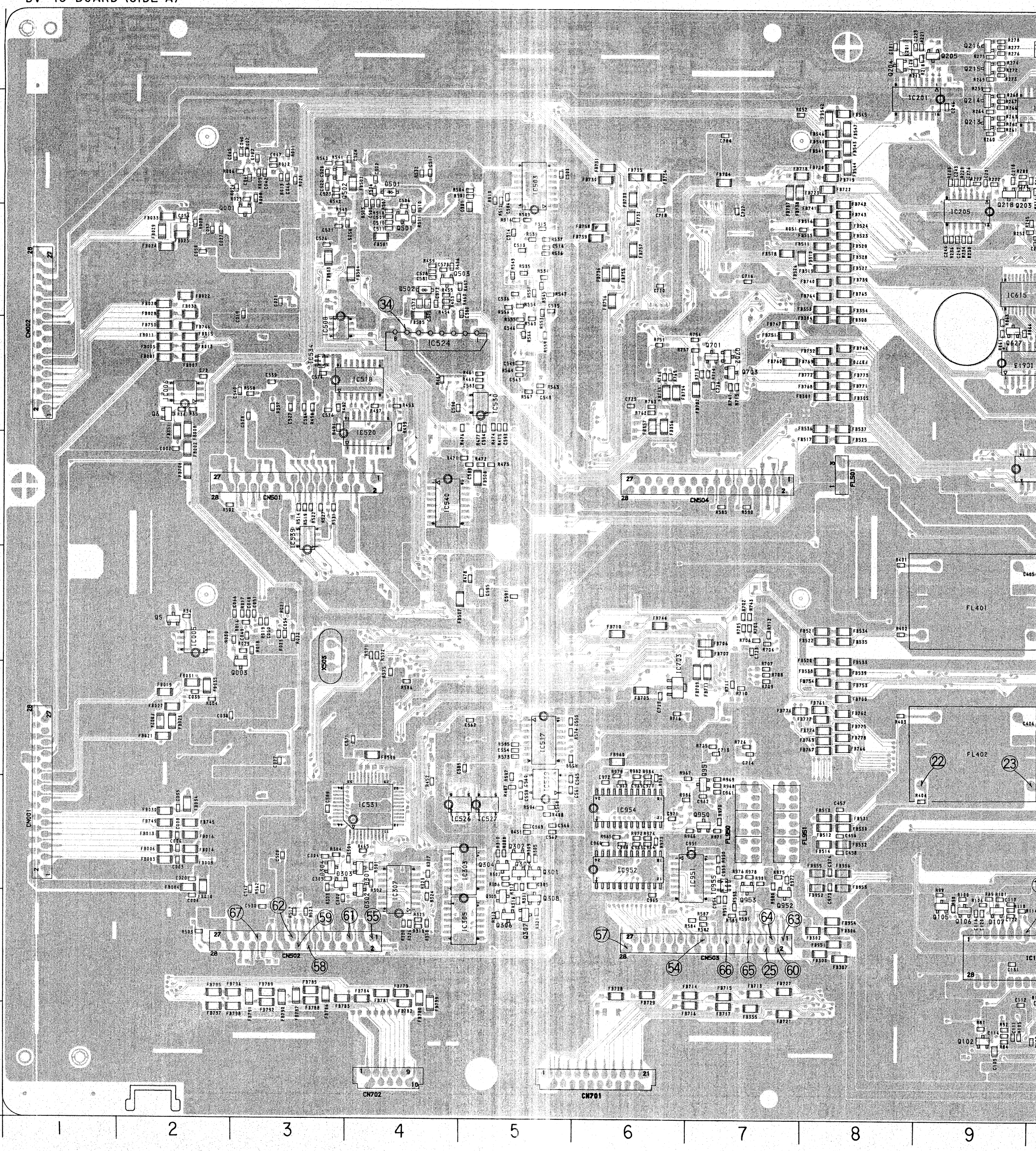
DV-19 BOARD

CN001	G-1	D102	H-18	IC004	G-24	IC203	B-10	IC404	F-10	IC512	H-25	IC527	H-5	IC5
CN002	C-1	D103	I-16	IC005	F-21	IC204	B-10	IC405	F-10	IC513	H-25	IC528	D-24	IC6
CN201	A-10	D104	H-18	C006	D-2	C205	C-9	IC406	G-10	IC514	D-22	IC529	G-23	IC6
CN501	E-3	D301	H-4	IC101	I-13	IC206	B-10	IC407	H-10	IC515	G-22	IC530	D-5	IC6
CN502	I-3	D302	H-4	IC102	J-17	IC207	C-18	IC501	B-22	IC516	F-23	IC531	H-4	IC6
CN503	I-7	D303	H-3	IC103	J-18	IC301	H-24	IC502	D-22	IC517	G-5	IC532	D-23	IC6
CN504	E-6	D304	H-3	IC104	I-9	IC302	H-23	IC503	B-5	IC518	D-4	IC533	E-23	IC6
CN601	A-12	D305	I-22	IC105	J-10	IC303	H-5	IC504	B-24	IC519	H-5	IC534	D-3	IC6
CN602	D-13	D501	B-4	IC106	J-10	IC304	H-22	IC505	C-22	IC520	E-4	IC535	F-22	IC6
CN701	J-6	D502	C-4	IC107	I-10	IC305	I-5	IC506	C-22	IC521	H-22	IC536	E-23	IC6
CN702	J-4	D602	E-17	IC108	J-11	IC307	H-4	IC507	C-24	IC522	G-23	IC537	D-23	IC6
				IC109	I-10	IC308	H-23	IC508	D-3	IC523	D-24	IC539	E-3	IC6
D001	F-24	IC001	D-24	IC110	I-13	IC401	G-18	IC509	D-24	IC524	D-4	IC540	E-5	IC6
D002	B-24	IC002	G-24	IC201	A-9	IC402	G-18	IC510	D-25	IC525	G-23	IC541	E-23	IC6
D101	J-16	IC003	C-24	IC202	C-19	IC403	H-17	IC511	G-22	IC526	H-5	IC542	E-23	IC6

DV-19 (VIDEO) PRINTED WIRING BOARD

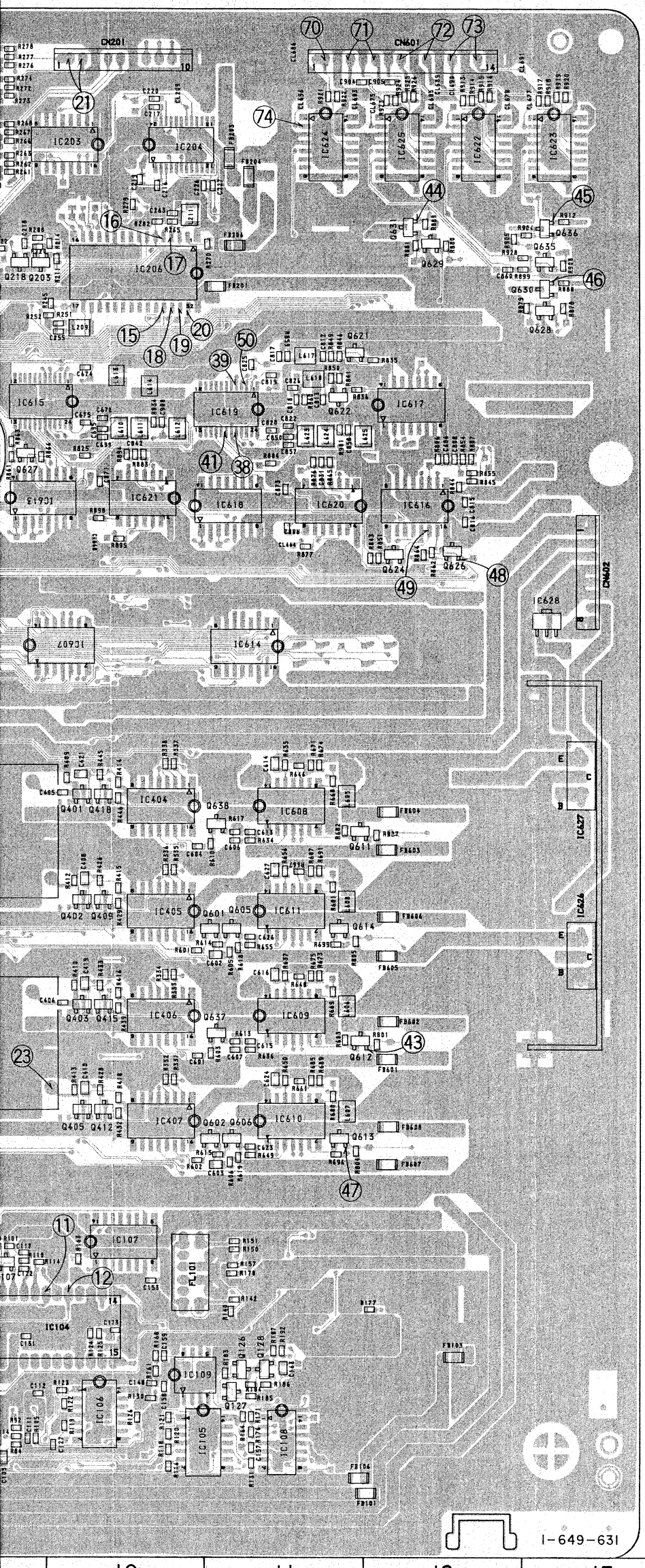
– Ref No. DV-19 BOARD : 7,000 Seriese –

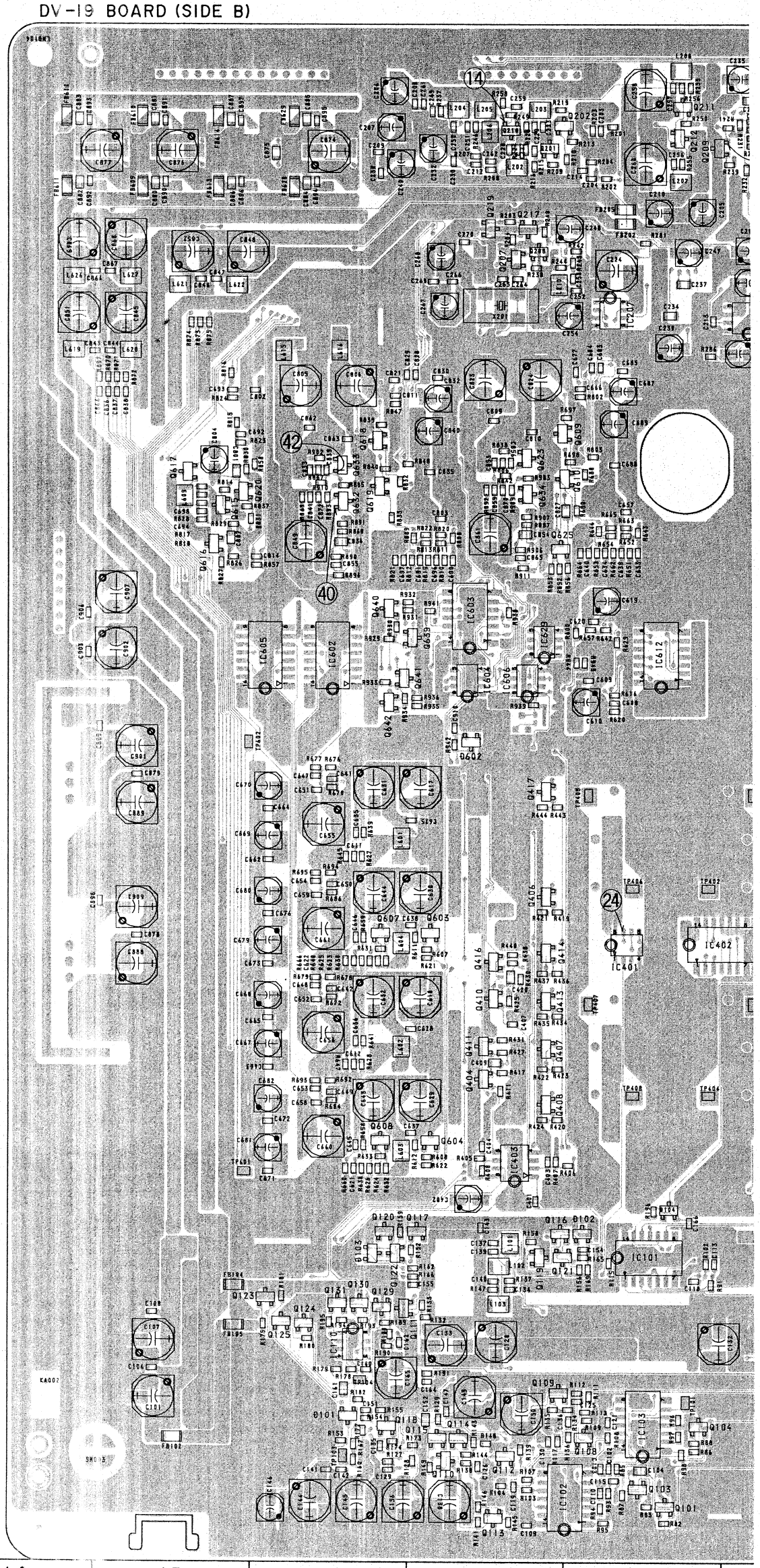
DV-19 BOARD (SIDE A)



IC543	E-23	IC616	D-12	IC703	G-6	Q001	C-3	Q110	J-17	Q125	I-16	Q209	A-18	Q305	I-5	Q410	G-17	Q604	F
IC602	E-16	IC617	C-12	IC704	D-21	Q002	D-24	Q111	J-17	Q126	I-11	Q210	A-17	Q306	I-5	Q411	G-17	Q605	G
IC603	E-17	IC618	D-11	IC705	C-21	Q003	G-3	Q112	J-17	Q127	I-11	Q211	A-18	Q307	I-5	Q412	H-10	Q606	F
IC604	E-17	IC619	C-11	IC706	D-21	Q004	F-24	Q113	J-17	Q128	I-11	Q212	A-18	Q308	I-5	Q413	G-17	Q607	G
IC605	E-16	IC620	D-11	IC707	C-21	Q005	F-2	Q114	J-17	Q129	I-16	Q213	B-9	Q309	I-22	Q414	G-17	Q608	F
IC606	E-17	IC621	D-10	IC709	G-20	Q006	D-2	Q115	J-17	Q130	I-16	Q214	B-9	Q310	I-22	Q415	G-10	Q609	C
IC607	E-10	IC622	B-12	IC710	G-20	Q101	J-18	Q116	H-17	Q131	I-16	Q215	A-9	Q401	F-10	Q416	G-17	Q610	D
IC608	F-11	IC623	B-13	IC711	D-21	Q102	J-9	Q117	H-17	Q201	A-17	Q216	A-9	Q402	F-10	Q417	F-17	Q611	F
IC609	G-11	IC624	B-11	IC730	F-21	Q103	J-18	Q118	J-16	Q203	B-9	Q217	B-17	Q403	G-10	Q418	F-10	Q612	G
IC610	H-11	IC625	B-12	IC950	H-21	Q104	J-18	Q119	I-17	Q202	A-17	Q218	B-9	Q404	G-17	Q501	C-4	Q613	H
IC611	F-11	IC626	G-13	IC951	H-7	Q105	I-9	Q120	H-16	Q204	A-8	Q219	B-17	Q405	H-10	Q502	B-4Q	Q614	G
IC612	E-18	IC627	E-13	IC952	H-6	Q106	I-9	Q121	I-17	Q205	A-9	Q301	H-5	Q406	F-17	503	C-4	Q615	D
IC613	D-9	IC628	E-13	IC954	H-6	Q107	I-9	Q122	I-16	Q206	A-19	Q302	H-5	Q407	G-17	Q601	G-11	Q616	D
IC614	E-11	IC629	E-17	IC955	H-7	Q108	J-18	Q123	I-16	Q207	B-17	Q303	H-5	Q408	H-17	Q602	H-11	Q617	D
IC615	C-9	IC701	B-20			Q109	J-17	Q124	I-16	Q208	B-17	Q304	H-5	Q409	F-10	Q603	G-17	Q618	C

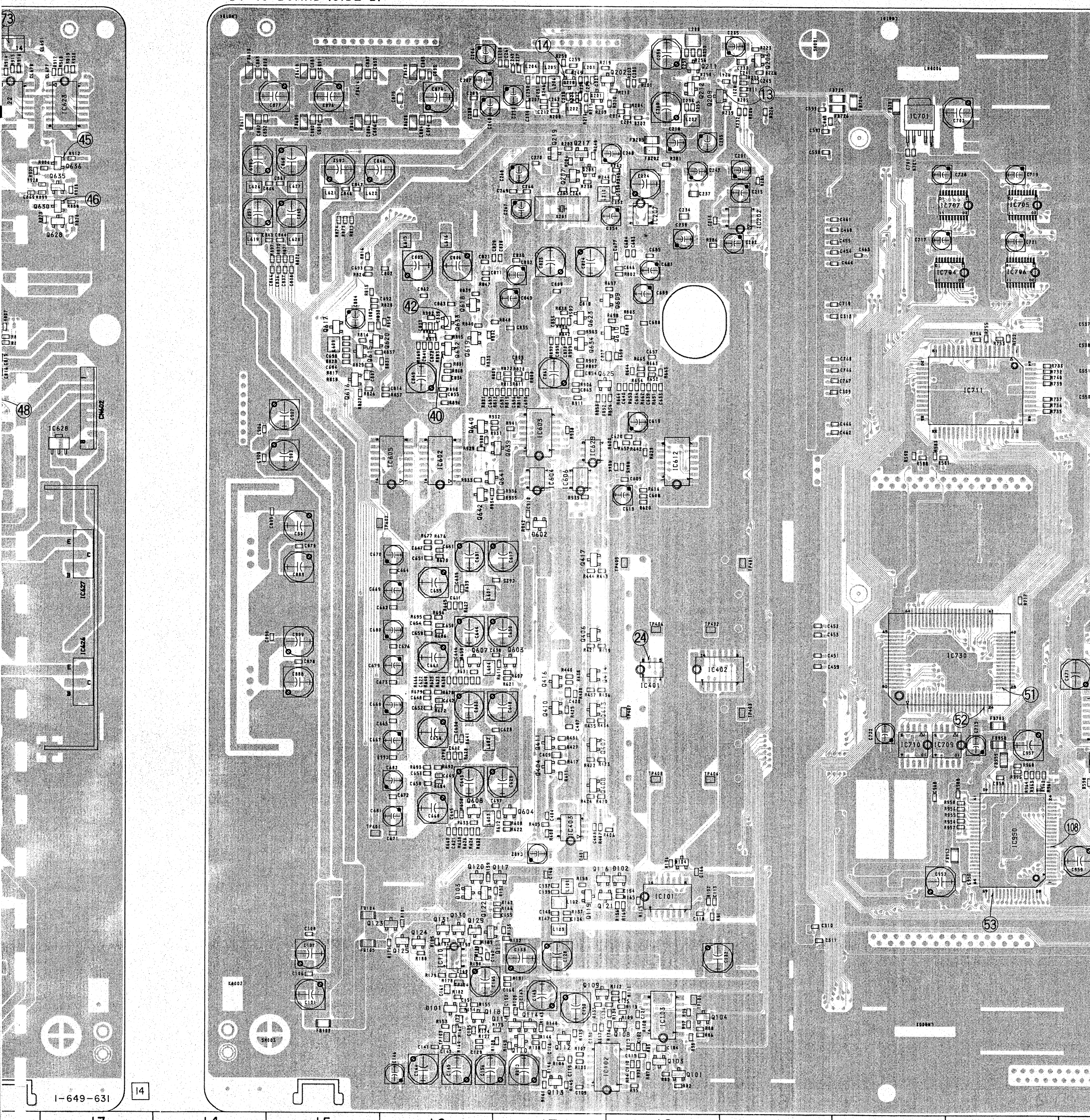
DV-19 BOARD (SIDE B)



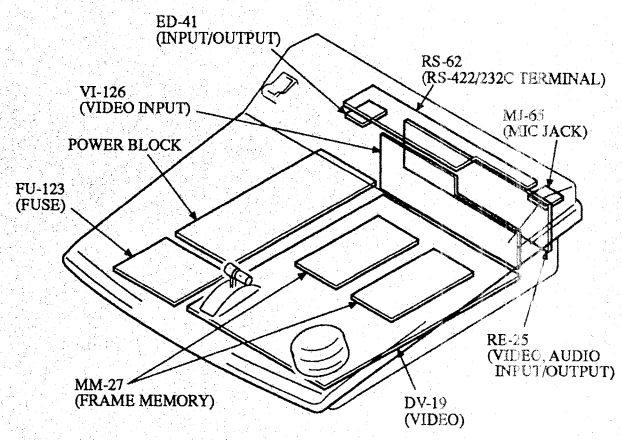


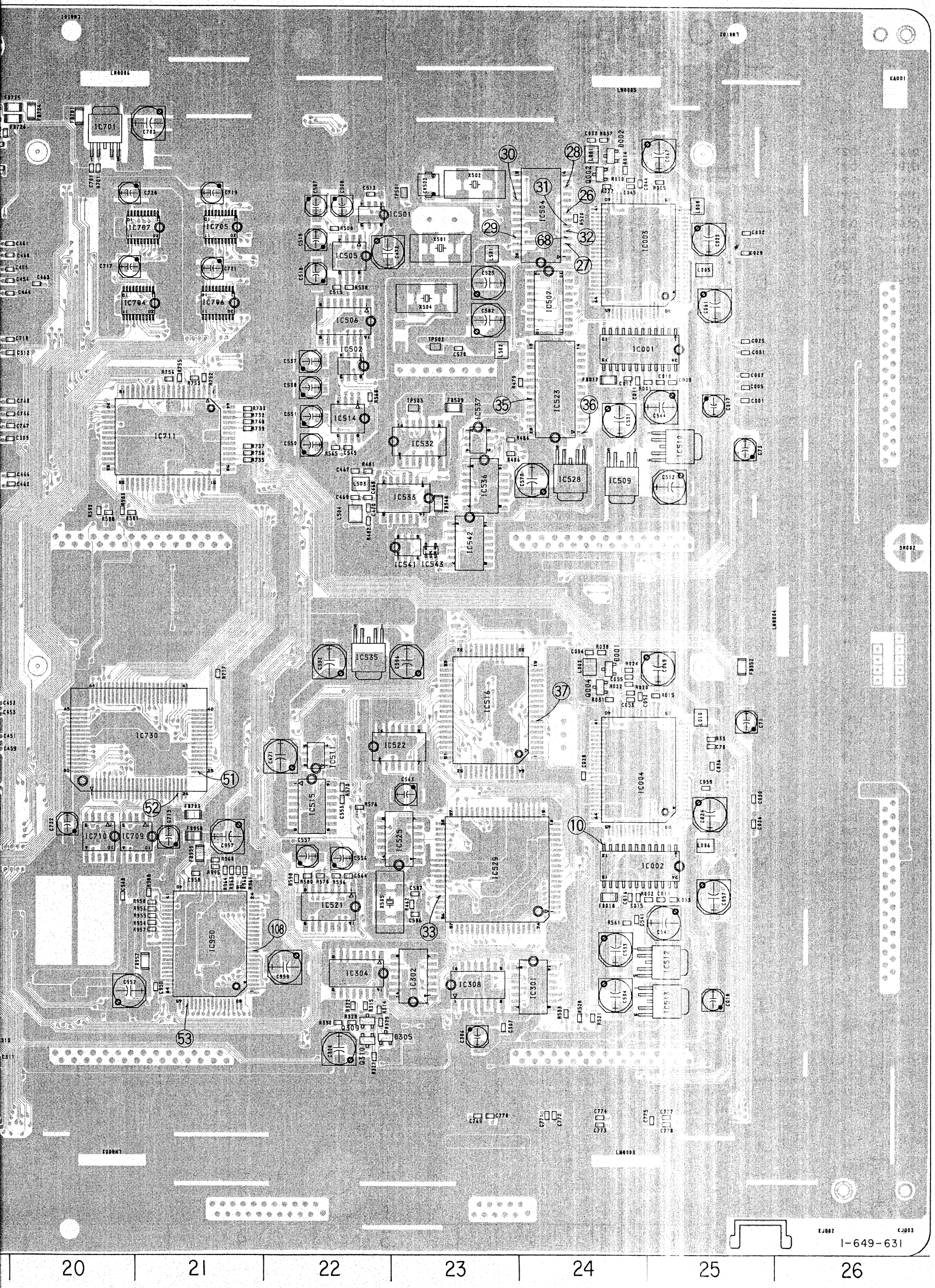
Q001	C-3	Q110	J-17	Q125	I-16	Q209	A-18	Q305	I-5	Q410	G-17	Q604	H-17	Q619	D-16	Q634	D-17	Q953	H-7
Q002	D-24	Q111	J-17	Q126	I-11	Q210	A-17	Q306	I-5	Q411	G-17	Q605	G-11	Q620	D-15	Q635	B-13		
Q003	G-3	Q112	J-17	Q127	I-11	Q211	A-18	Q307	I-5	Q412	H-10	Q606	H-11	Q621	C-11	Q636	B-13		
Q004	F-24	Q113	J-17	Q128	I-11	Q212	A-18	Q308	I-5	Q413	G-17	Q607	G-16	Q622	C-11	Q637	G-11		
Q005	F-2	Q114	J-17	Q129	I-16	Q213	B-9	Q309	I-22	Q414	G-17	Q608	H-16	Q623	D-17	Q638	F-11		
Q006	D-2	Q115	J-17	Q130	I-16	Q214	B-9	Q310	I-22	Q415	G-10	Q609	C-18	Q624	D-12	Q639	E-17		
Q101	J-18	Q116	H-17	Q131	I-16	Q215	A-9	Q401	F-10	Q416	G-17	Q610	D-18	Q625	D-17	Q640	E-16		
Q102	J-9	Q117	H-17	Q201	A-17	Q216	A-9	Q402	F-10	Q417	F-17	Q611	F-11	Q626	D-12	Q641	E-17		
Q103	J-18	Q118	J-16	Q203	B-9	Q217	B-17	Q403	G-10	Q418	F-10	Q612	G-11	Q627	D-9	Q642	E-16		
Q104	J-18	Q119	I-17	Q202	A-17	Q218	B-9	Q404	G-17	Q501	C-4	Q613	H-11	Q628	C-13	Q701	D-7		
Q105	I-9	Q120	H-16	Q204	A-8	Q219	B-17	Q405	H-10	Q502	B-4Q	Q614	G-11	Q629	B-12	Q702	D-7		
Q106	I-9	Q121	I-17	Q205	A-9	Q301	H-5	Q406	F-17	503	C-4	Q615	D-15	Q630	B-13	Q703	D-7		
Q107	I-9	Q122	I-16	Q206	A-19	Q302	H-5	Q407	G-17	Q601	G-11	Q616	D-15	Q631	B-12	Q950	H-7		
Q108	J-18	Q123	I-16	Q207	B-17	Q303	H-5	Q408	H-17	Q602	H-11	Q617	D-15	Q632	D-16	Q951	H-7		
Q109	J-17	Q124	I-16	Q208	B-17	Q304	H-5	Q409	F-10	Q603	G-17	Q618	C-16	Q633	D-16	Q952	H-7		

DV-19 BOARD (SIDE B)



D-16	Q634	D-17	Q953	H-7
D-15	Q635	B-13		
C-11	Q636	B-13		
C-11	Q637	G-11		
D-17	Q638	F-11		
D-12	Q639	E-17		
D-17	Q640	E-16		
D-12	Q641	E-17		
D-9	Q642	E-16		
C-13	Q701	D-7		
B-12	Q702	D-7		
B-13	Q703	D-7		
B-12	Q950	H-7		
D-16	Q951	H-7		
D-16	Q952	H-7		





DV-19 (2/7) (VIDEO (2/7)) SCHEMATIC DIAGRAM • See page 4-82 for PRINTED WIRING BOARD

– Ref No. DV-19 BOARD : 7,000 Seriese –

DV-19 BOARD (2/7)

IC202 V/PGM SELECT SW

IC205 SYNC SEPARATOR

IC207 INV.

Q203, 216 BUFFER

Q207, 208 CLAMP

IC201 SELECT SW

Q204, 205 LPF

Q206 CLAMP

Q209 BUFFER

Q211, 212 SYNC& BURST MIXER

IC204 NTSC/PAL ENCODER

Q210 BPF BUFFER

IC203 EV BST SELECT

(7/7) V_BET

(1/7) MON_VIN

(7/7) MOUT_SEL

(5/7) MON_PGMIN

(1/7) GND_2

(2/7)(3/7)(5/7)(1/7) GND_3

(7/7) CG CLK, CG DATA, CG CS, CG RESET

(5/7)(7/7) EV_SYNCLEV, EV_SETUP

(5/7)(6/7) DC5V

(4/7)(5/7) SCO

(6/7) GND

(5/7)(6/7) DC-5V

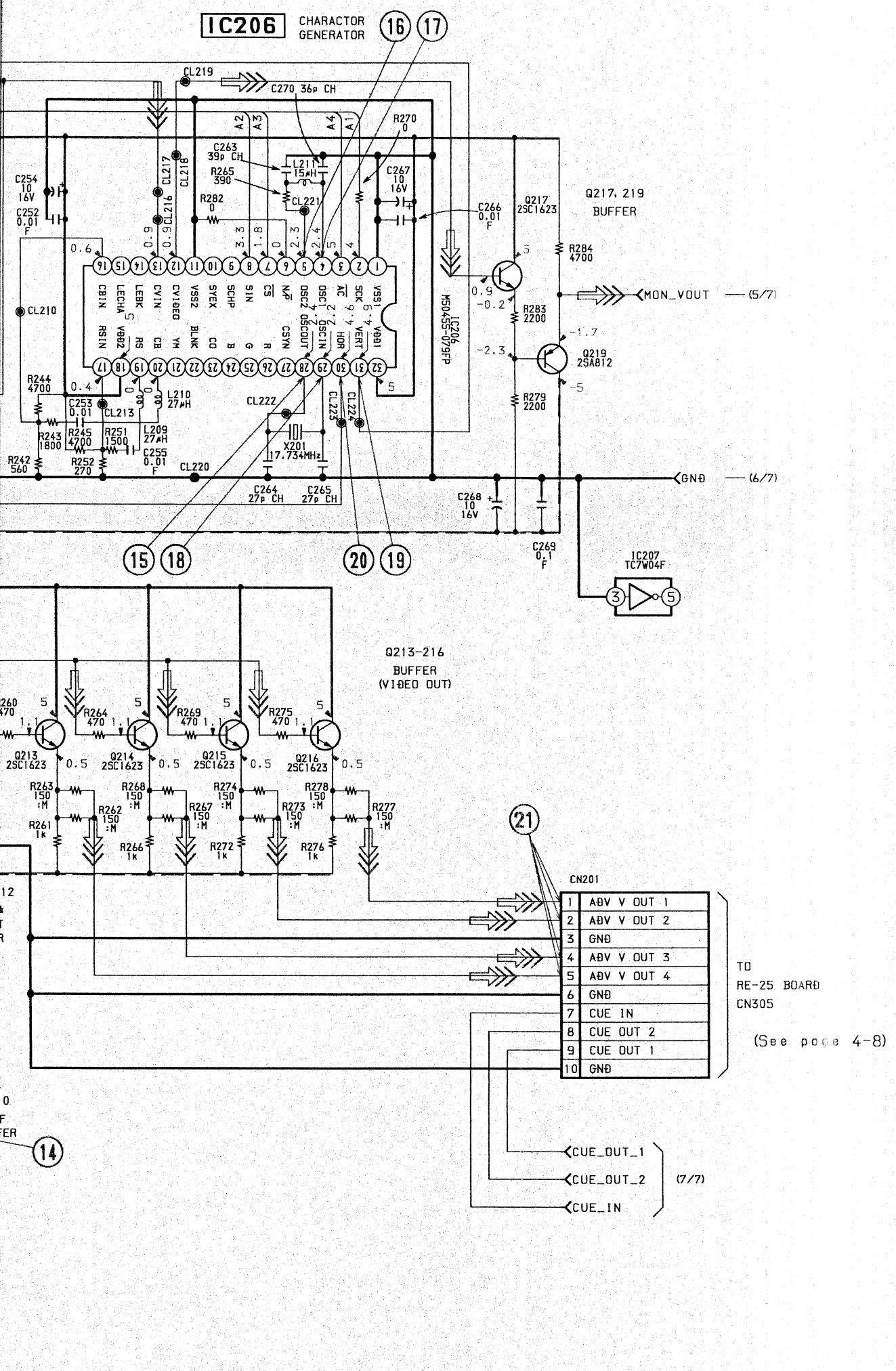
(4/7)(5/7) SCI

(4/7) AD_CP, AD_BLK, AD_SYNC, AD_BF

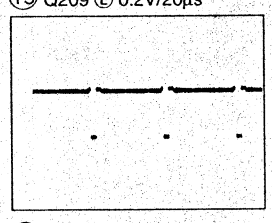
(5/7)(7/7) EV_BST_R, EV_BST_B

COLOR PLUS BPF

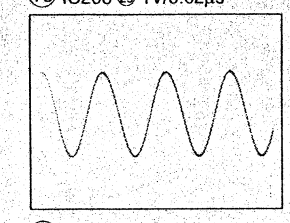
LPF



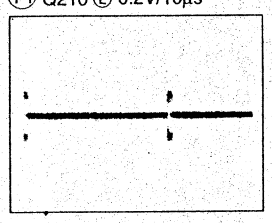
⑬ Q209 Ⓔ 0.2V/20μs



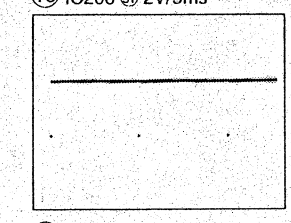
⑱ IC206 ㉙ 1V/0.02μs



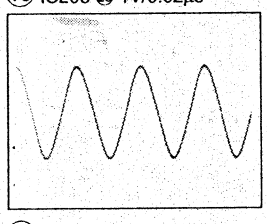
⑭ Q210 Ⓔ 0.2V/10μs



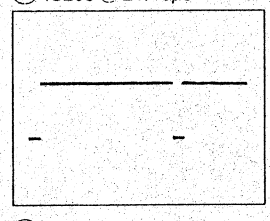
⑲ IC206 ㉛ 2V/5ms



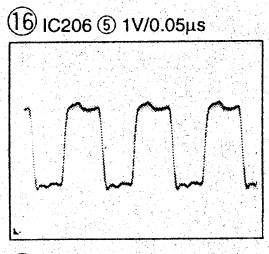
⑮ IC206 ㉘ 1V/0.02μs



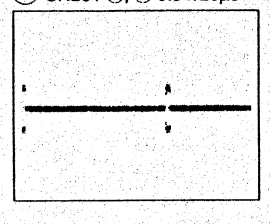
⑳ IC206 ㉚ 2V/10μs



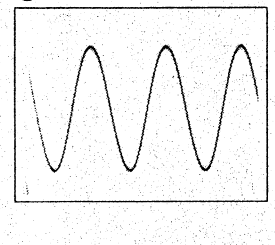
⑯ IC206 ⑤ 1V/0.05μs



㉑ CN201 ①, ② 0.5V/20μs



⑰ IC206 ④ 1V/0.05μs



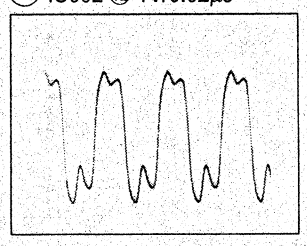
- **SIGNAL PATH (ANALOG)**

VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
⇨	⇨	⇨	

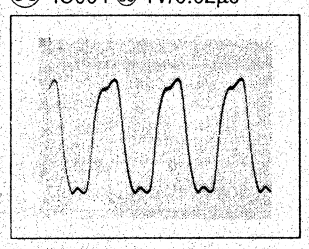
DV-19 (1/7) (VIDEO (1/7)) SCHEMATIC DIAGRAM

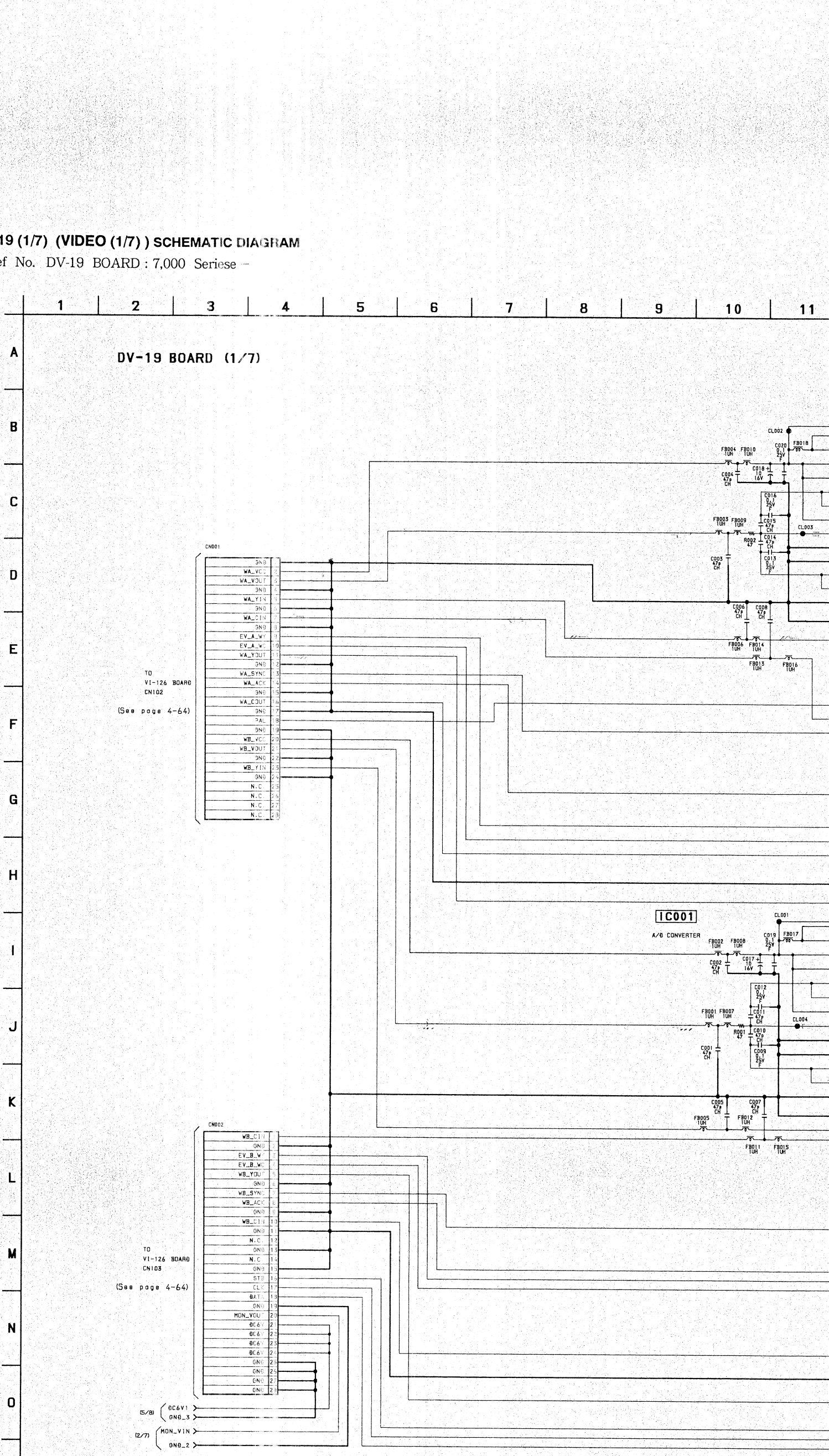
– Ref No. DV-19 BOARD : 7,000 Seriese –

⑩ IC002 ⑫ 1V/0.02μs



56 IC004 80 1V/0.02μs

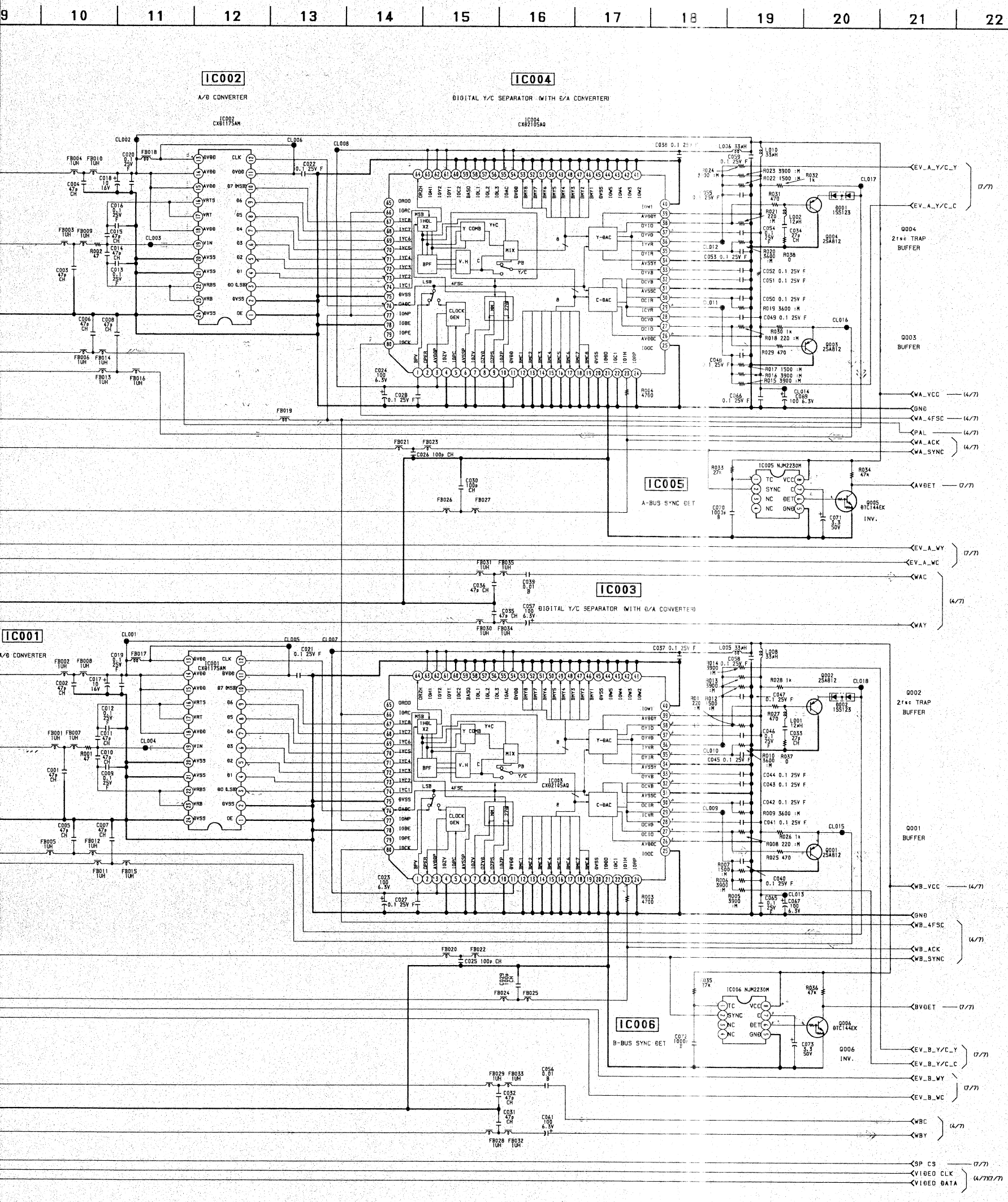




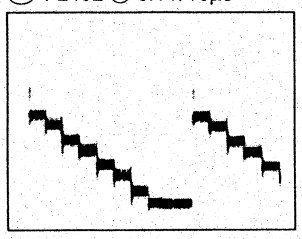
16

• **SIGNAL PATH (ANALOG)**

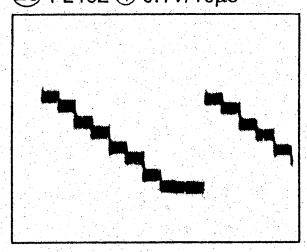
VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
→	→→	→→→	


9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
A B C D E F G H I J K L M N O P Q
IC002
A/D CONVERTER
IC004
DIGITAL Y/C SEPARATOR (WITH D/A CONVERTER)
IC005
A-BUS SYNC DET
IC003
DIGITAL Y/C SEPARATOR (WITH D/A CONVERTER)
IC001
A/D CONVERTER
IC006
B-BUS SYNC DET
Q004 2fsc TRAP BUFFER
Q003 BUFFER
Q002 2fsc TRAP BUFFER
Q001 BUFFER
Q005 INV.
Q006 INV.
EV_A_Y/C_Y
EV_A_Y/C_C
WA_VCC
GND
WA_4FSC
PAL
WA_ACK
WA_SYNC
AVDET
EV_A_WY
EV_A_WC
WAC
WAY
WB_VCC
WB_4FSC
WB_ACK
WB_SYNC
BVDET
EV_B_Y/C_Y
EV_B_Y/C_C
EV_B_WY
EV_B_WC
WBC
WBY
SP CS
VIDEO CLK
VIDEO DATA

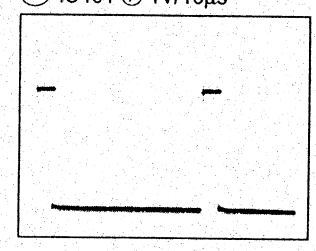
22 FL402 ⑤ 0.1V/10µs



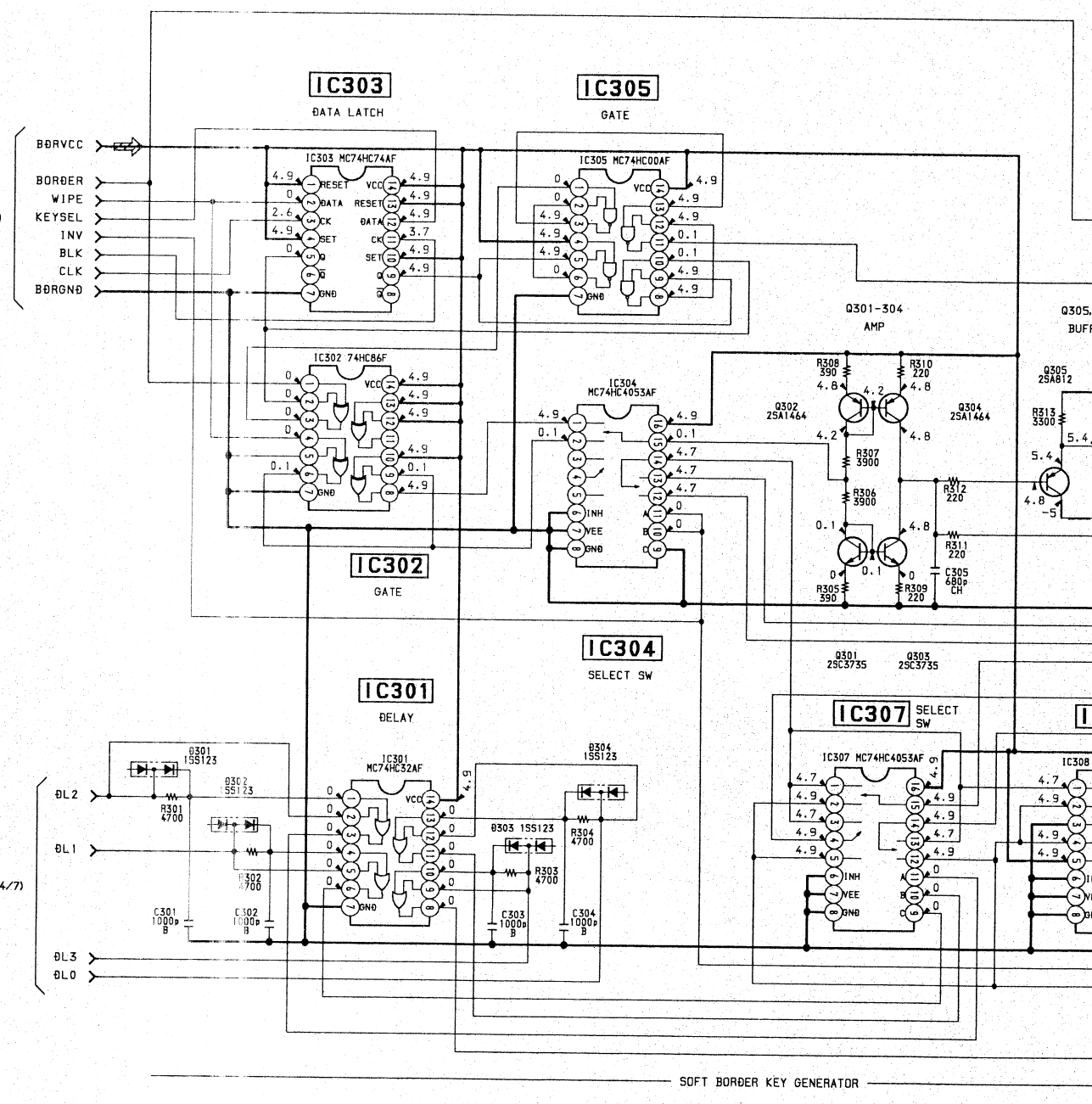
23 FL402 ④ 0.1V/10µs



24 IC401 ⑦ 1V/10µs



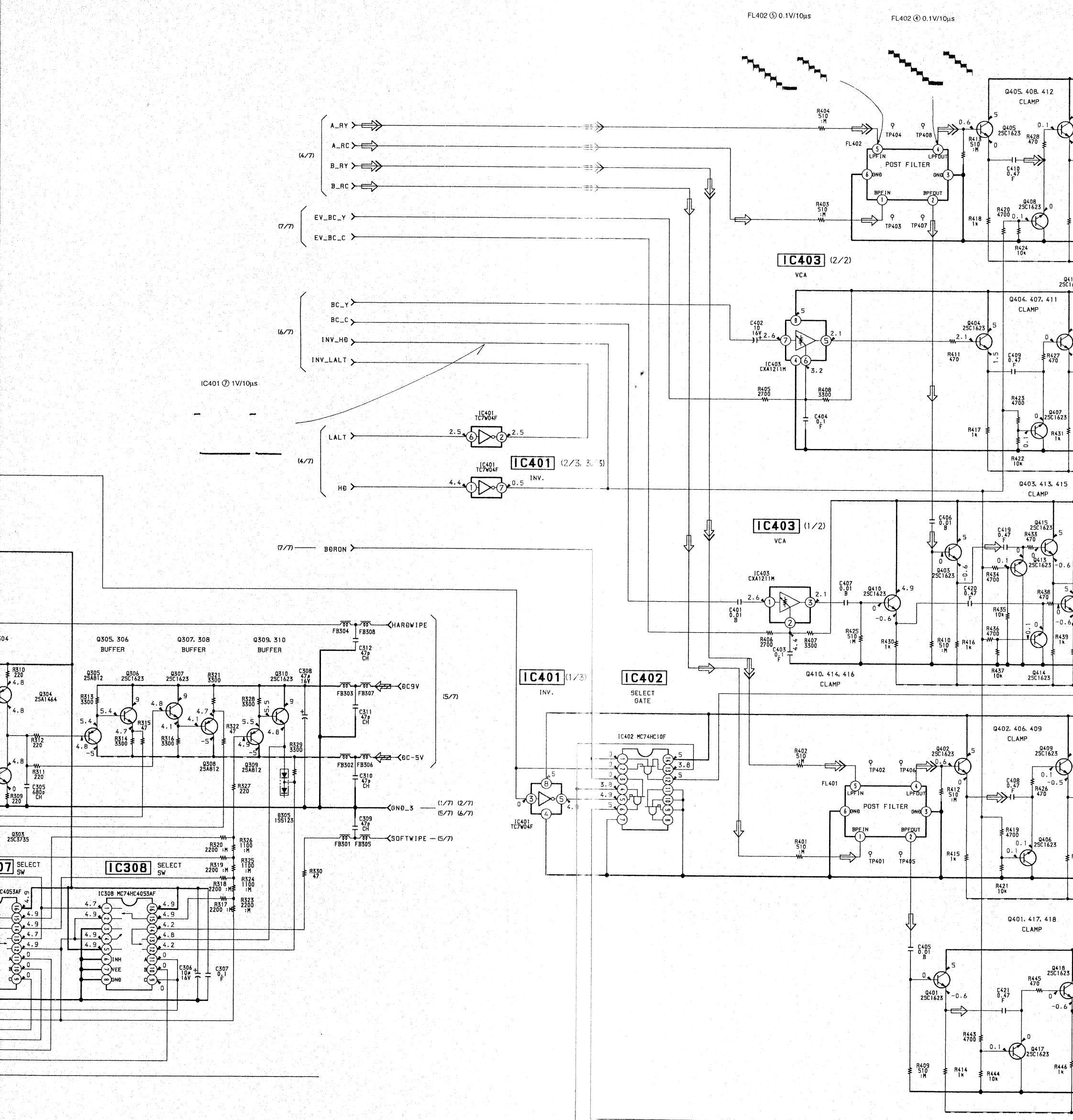
DV-19 BOARD (3/7)

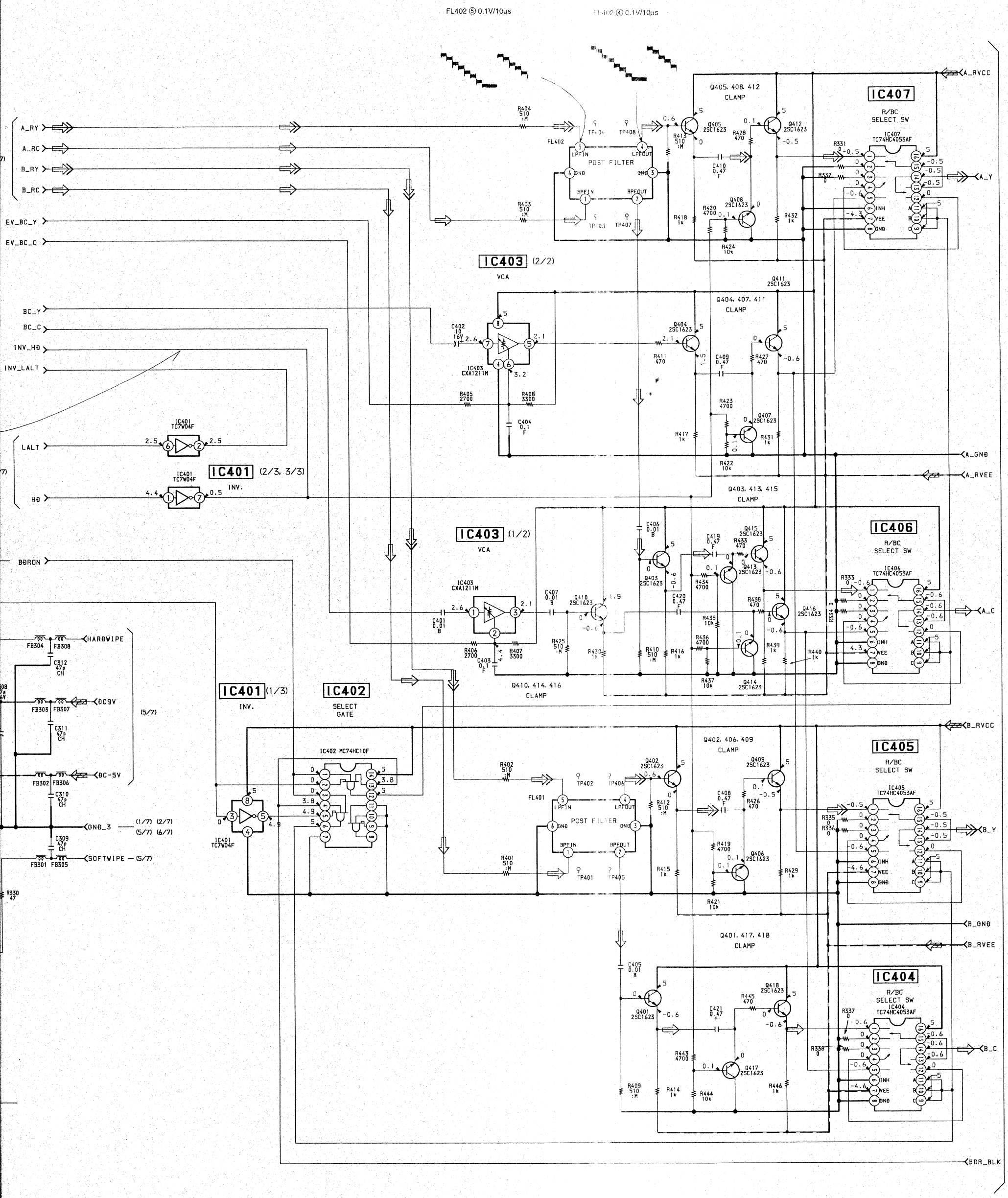


16

• **SIGNAL PATH (ANALOG)**

VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
⇨	⇨		


FL402 ⑤ 0.1V/10µs
FL402 ④ 0.1V/10µs
IC401 ⑦ 1V/10µs
A_RY
A_RC
B_RY
B_RC
(4/7)
EV_BC_Y
EV_BC_C
(7/7)
BC_Y
BC_C
(6/7)
INV_HD
INV_LALT
LALT
HD
(4/7)
IC401 (2/3, 3/3)
INV.
IC401 TC7W04F
(7/7) BDRON
IC403 (2/2)
VCA
IC403 (1/2)
VCA
IC401 (1/3)
INV.
IC402
SELECT GATE
IC402 MC74HC10F
IC308
SELECT SW
IC308 MC74HC4053AF
IC403 CXA1211M
POST FILTER
FL402
FL401
Q305, 306 BUFFER
Q307, 308 BUFFER
Q309, 310 BUFFER
Q405, 408, 412 CLAMP
Q404, 407, 411 CLAMP
Q403, 413, 415 CLAMP
Q410, 414, 416 CLAMP
Q402, 406, 409 CLAMP
Q401, 417, 418 CLAMP
HARDWIPE
DC9V
DC-5V
GND_3
SOFTWIPE
(5/7)
(1/7) (2/7) (5/7) (6/7)

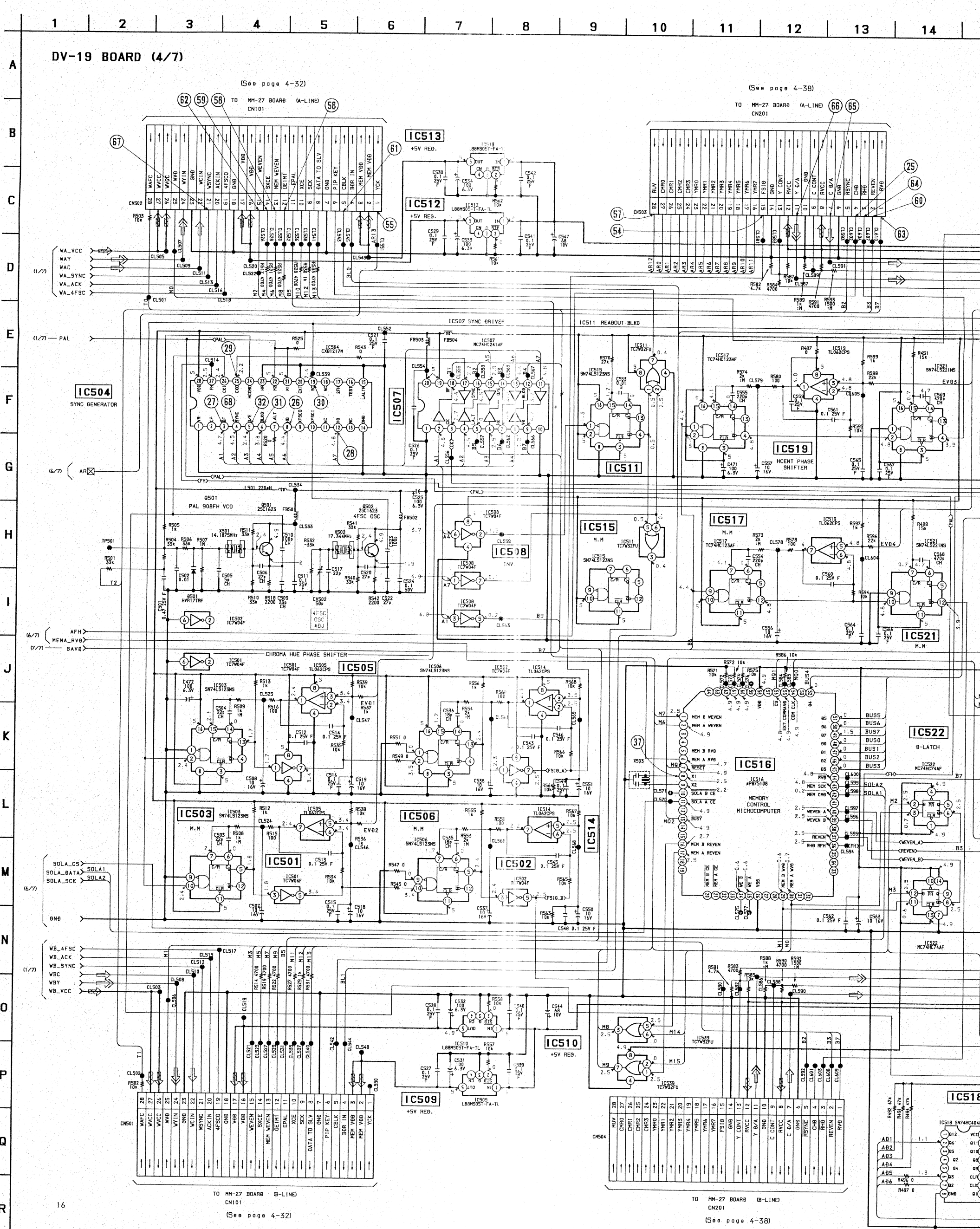

FL402 ⑤ 0.1V/10µs
FL402 ④ 0.1V/10µs
A_RY
A_RC
B_RY
B_RC
EV_BC_Y
EV_BC_C
BC_Y
BC_C
INV_HD
INV_LALT
LALT
HD
BDRON
HARDWIPE
DC9V
DC-5V
GND_3
SOFTWIPE — (5/7)
IC401 (2/3, 3/3) INV.
IC401 (1/3) INV.
IC402 SELECT GATE
IC403 (1/2) VCA
IC403 (2/2) VCA
IC405 R/BC SELECT SW
IC406 R/BC SELECT SW
IC407 R/BC SELECT SW
IC404 R/BC SELECT SW
POST FILTER
CLAMP
A_RVCC
A_Y
A_GND
A_RVEE
A_C
B_RVCC
B_Y
B_GND
B_RVEE
B_C
BDR_BLK
(5/7)

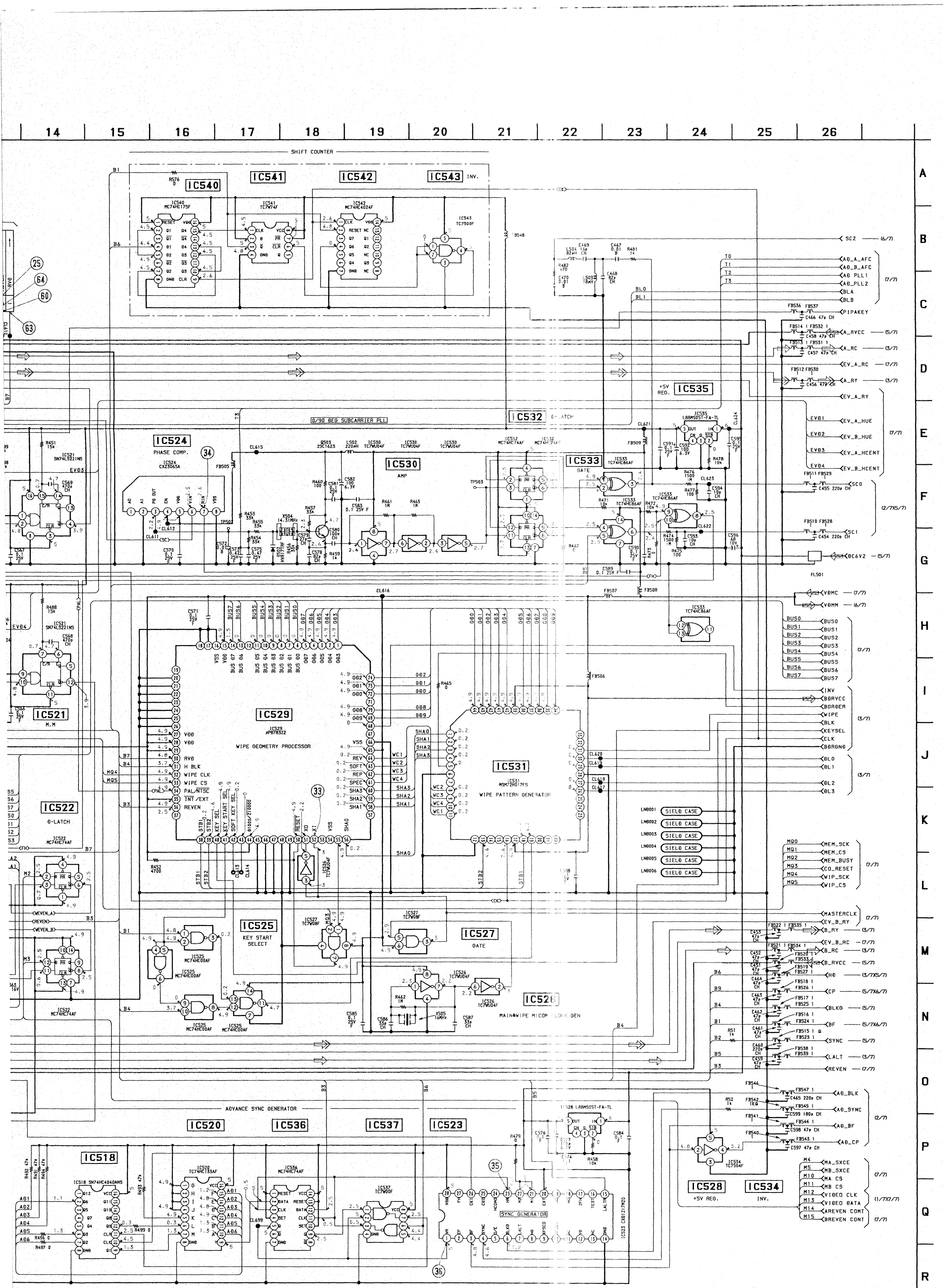
DV-19 (4/7) (VIDEO (4/7)) SCHEMATIC DIAGRAM

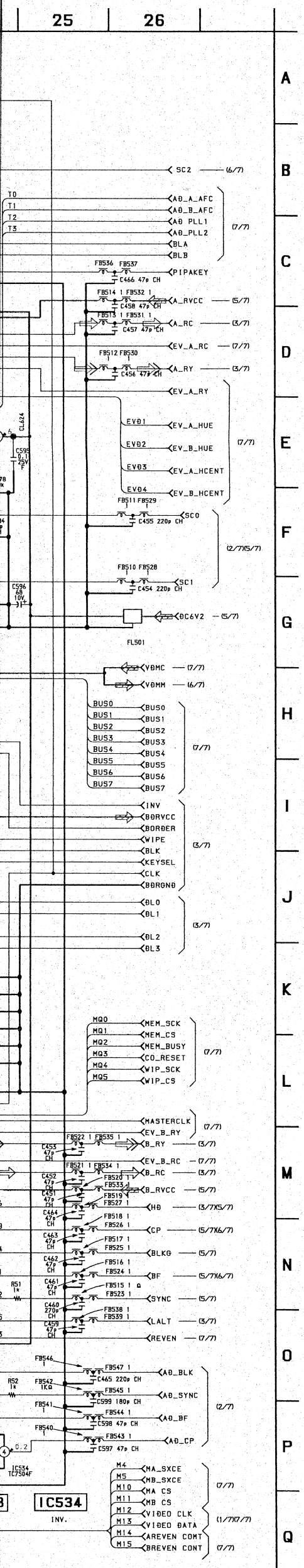
• See page 4-82 for PRINTED WIRING BOARD

– Ref No. DV-19 BOARD : 7,000 Seriese –

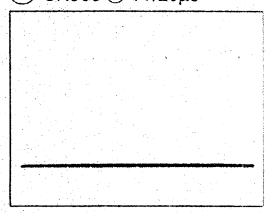
DV-19 BOARD (4/7)



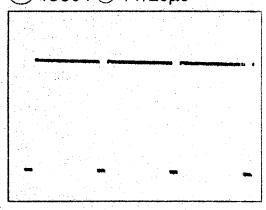

14
15
16
17
18
19
20
21
22
23
24
25
26
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
SHIFT COUNTER
IC540
IC541
IC542
IC543 INV.
IC540 MC74HC175F
IC541 TC7W74F
IC542 MC74HC4024F
IC543 TC7S00F
IC532 B-LATCH
0/90 DEG SUBCARRIER PLL
IC524 PHASE COMP.
IC524 CX25065A
IC530 AMP
IC530 TC7WU04F
IC533 GATE
IC533 TC74HC86AF
IC535 +5V REG.
IC535 L88MS05T-FA-TL
IC521 M.M
IC521 SN74LS221NS
IC522 Θ-LATCH
IC522 MC74HC74AF
IC529 WIPE GEOMETRY PROCESSOR
IC529 #P078322
IC531 WIPE PATTERN GENERATOR
IC531 MSM72H017FS
IC525 KEY START SELECT
IC525 MC74HC00AF
IC527 GATE
IC527 TC7W08F
IC526 MAIN&WIPE MICOM CLOCK GEN
IC526 TC7WU04F
IC528 +5V REG.
IC528 L88MS05T-FA-TL
IC534 INV.
IC534 TC7S04F
ADVANCE SYNC GENERATOR
IC520
IC536
IC537
IC523
IC518
IC518 SN74HC4040ANS
IC520 TC74HC133AF
IC536 MC74HC74AF
IC537 TC7W00F
SYNC GENERATOR
IC523 CXD1217M20
SIELΘ CASE
SC2
SC0
SC1
ΘC6V2
FL501
VΘMC
VΘMM
PIPAKEY
A_RVCC
A_RC
EV_A_RC
A_RY
EV_A_RY
EV_A_HUE
EV_B_HUE
EV_A_HCENT
EV_B_HCENT
AΘ_A_AFC
AΘ_B_AFC
AΘ PLL1
AΘ_PLL2
BLA
BLB
BUS0
BUS1
BUS2
BUS3
BUS4
BUS5
BUS6
BUS7
INV
BΘRVCC
BORDER
WIPE
BLK
KEYSEL
CLK
BΘRGNΘ
ΘL0
ΘL1
ΘL2
ΘL3
MEM_SCK
MEM_CS
MEM_BUSY
CO_RESET
WIP_SCK
WIP_CS
MASTERCLK
B_RY
EV_B_RY
B_RC
EV_B_RC
B_RVCC
HΘ
CP
BLKG
BF
SYNC
LALT
REVEN
AΘ_BLK
AΘ_SYNC
AΘ_BF
AΘ_CP
MA_SXCE
MB_SXCE
MA CS
MB CS
VIDEO CLK
VIDEO ΘATA
AREVEN COMT
BREVEN CONT



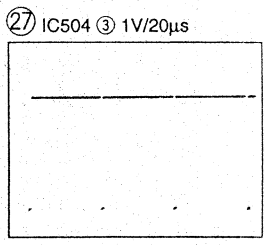
㉕ CN503 ④ 1V/20µs



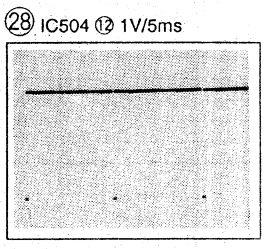
㉖ IC504 ⑧ 1V/20µs



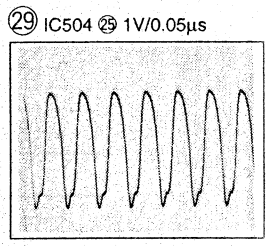
㉗ IC504 ③ 1V/20µs



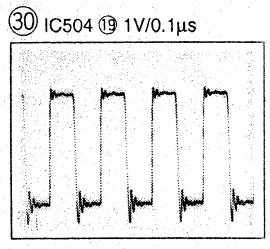
㉘ IC504 ⑫ 1V/5ms



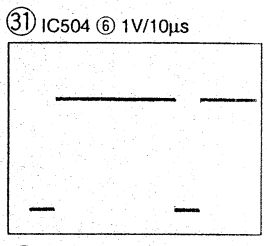
㉙ IC504 ㉕ 1V/0.05µs



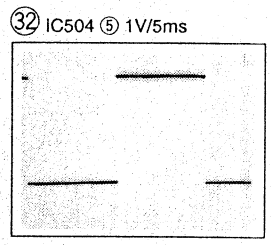
㉚ IC504 ⑲ 1V/0.1µs



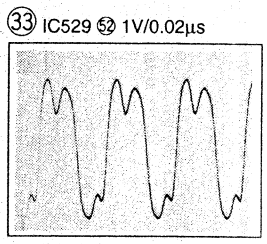
㉛ IC504 ⑥ 1V/10µs



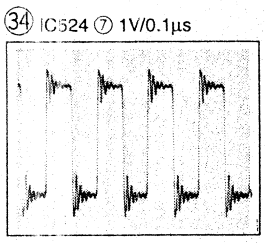
㉜ IC504 ⑤ 1V/5ms



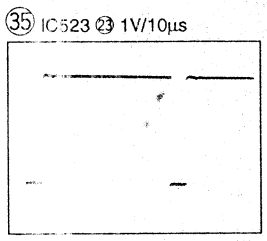
㉝ IC529 ㊷ 1V/0.02µs



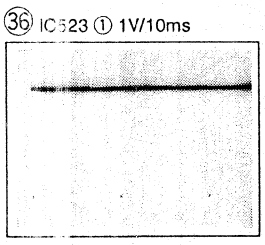
㉞ IC524 ⑦ 1V/0.1µs



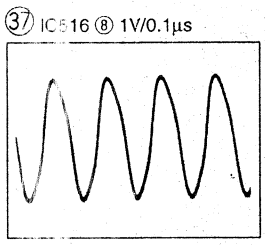
㉟ IC523 ㉓ 1V/10µs



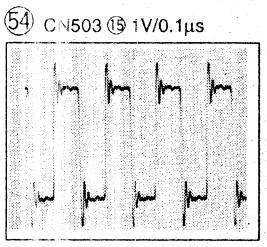
㊱ IC523 ① 1V/10ms



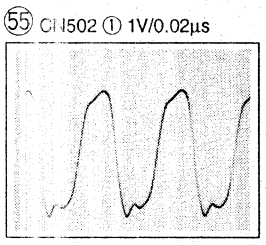
㊲ IC516 ⑧ 1V/0.1µs



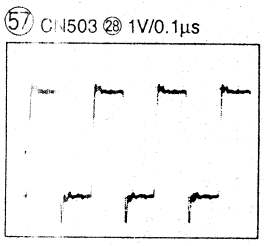
㊴ CN503 ⑮ 1V/0.1µs



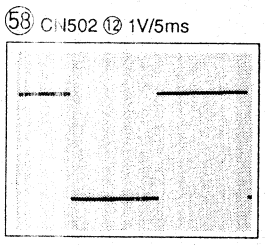
㊵ CN502 ① 1V/0.02µs



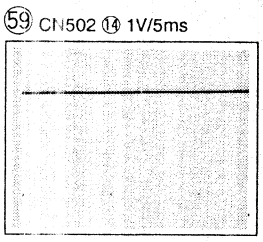
㊼ CN503 ㉘ 1V/0.1µs



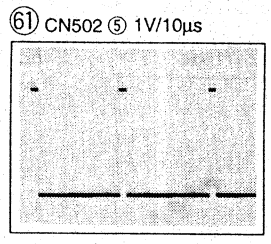
㊽ CN502 ⑫ 1V/5ms



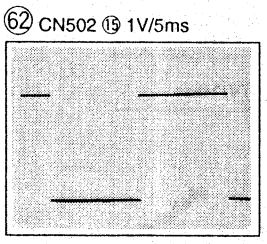
㊾ CN502 ⑭ 1V/5ms



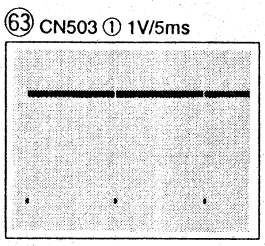
㊶ CN502 ⑤ 1V/10µs



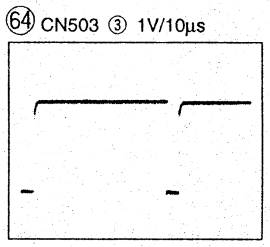
㊷ CN502 ⑮ 1V/5ms



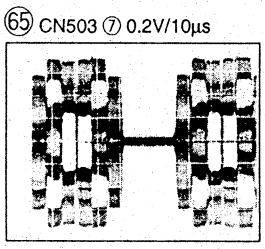
㊸ CN503 ① 1V/5ms



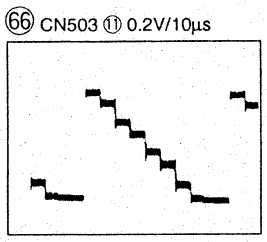
㊹ CN503 ③ 1V/10µs



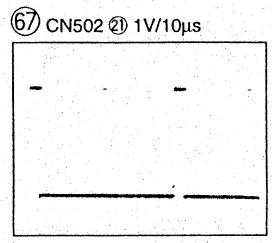
㊺ CN503 ⑦ 0.2V/10µs



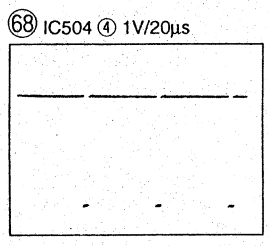
㊻ CN503 ⑪ 0.2V/10µs



㊼ CN502 ㉑ 1V/10µs



㊽ IC504 ④ 1V/20µs

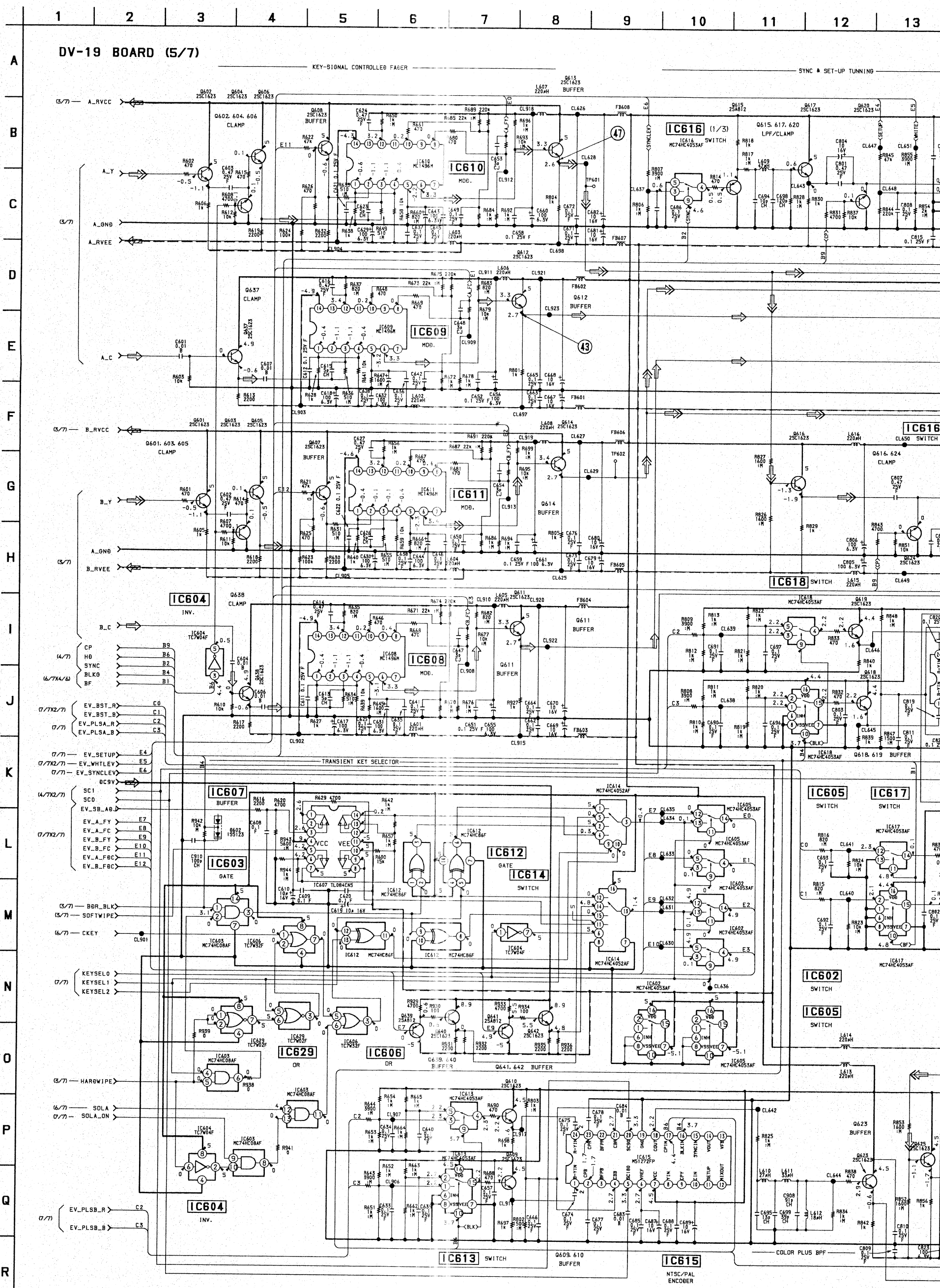


- **SIGNAL PATH (ANALOG)**

VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
⇨	⇨		

DV-19 (5/7) (VIDEO (5/7)) SCHEMATIC DIAGRAM • See page 4-82 for PRINTED WIRING BOARD

– Ref No. DV-19 BOARD : 7,000 Seriese –



SYNC & SET-UP TUNNING

Q623, 631 Y & SYNC MIXER

Q635, 636 Y & C MIXER

OUTPUT DRIVER

MON_PGMIN — (2/7)

IC616 (1/3) SWITCH

Q615, 617, 620 LPF/CLAMP

IC616 (2/3) SWITCH

Q626 BUFFER

IC623 75 Ω DRIVER

IC622 75 Ω DRIVER

CN601

14	GNĐ
13	VOUT1
12	GNĐ
11	VOUT2
10	GNĐ
9	YOUT1
8	GNĐ
7	YOUT2
6	GNĐ
5	COUT1
4	GNĐ
3	COUT2
2	GNĐ
1	MONOUT

TO RE-25 CN303

Q628, 630 C&BURST MIXER

C & BURST MIXER

IC616 (3/3) SWITCH

Q616, 624 CLAMP

Q632 BUFFER

IC618 SWITCH

IC620 MOD.

Q619 BUFFER

Q618, 619 BUFFER

IC619 NTSC/PAL ENCODER

COLOR PLUS BPF

Q633 BUFFER

MON_VOUT — (2/7)

IC624 75 Ω DRIVER

IC628 +9V REG.

IC627 +5V REG. HEAT SINK

IC626 -5V REG.

CN602

1	ĐC6V1
2	ĐC6V2
3	ĐC6V3
4	GNĐ
5	GNĐ
6	GNĐ
7	-8V
8	ĐC15V

ĐC9V — (3/7)

ĐC6V2 — (4/7)

ĐC6V1 — (1/7)(7/7)

LNĐ101 CHASIS GNĐ SCREW POINT

LNĐ102 CHASIS GNĐ SCREW POINT

LNĐ103 CHASIS GNĐ SCREW POINT

LNĐ104 CHASIS GNĐ SCREW POINT

ĐC5V — (2/7)(3/7)(6/7)

GNĐ_3 — (1/7)(2/7)(3/7)(6/7)

ĐC-5V — (2/7)(3/7)(6/7)

IC605 SWITCH

IC617 SWITCH

IC602 SWITCH

Q622 25A812 LPF

Q621 25A812 LPF

BURST GEN & COLOR CORRECTER

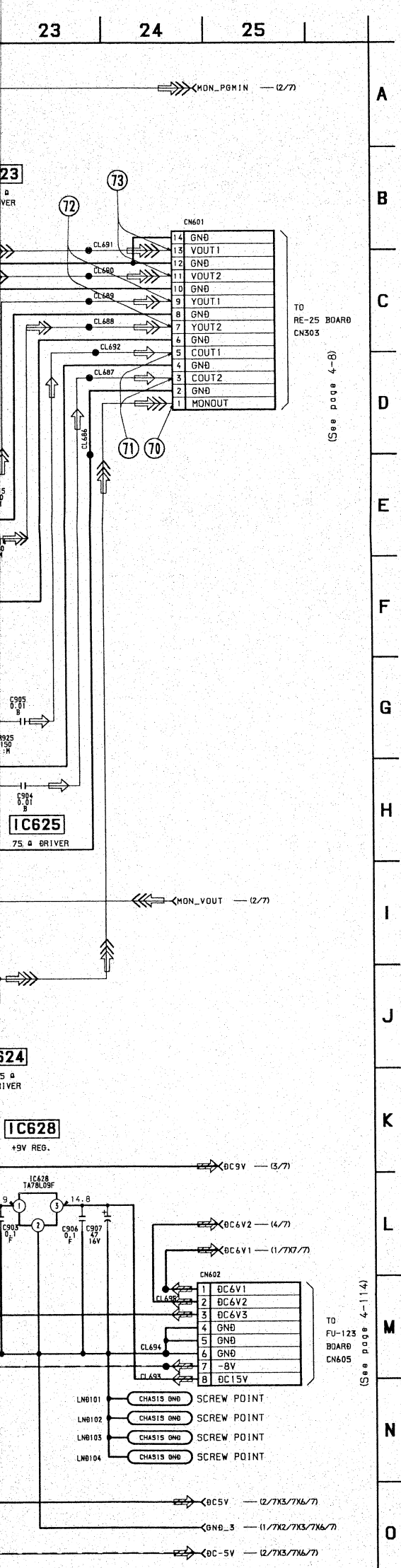
Q625, 627 CLAMP

Q623 BUFFER

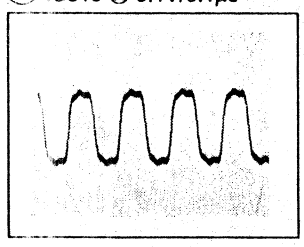
Q624 BUFFER

IC613 MC74HC4053AF

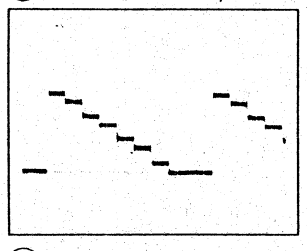
IC621 MOD.



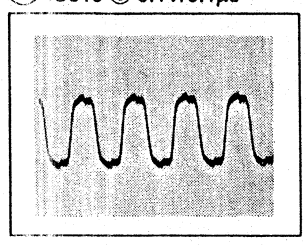
38 IC619 ⑳ 0.1V/0.1µs



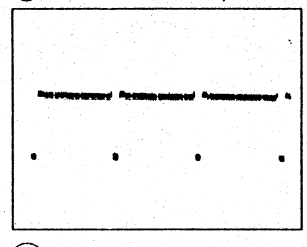
47 Q613 Ⓔ 0.2V/10µs



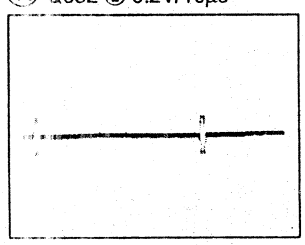
39 IC619 ⑤ 0.1V/0.1µs



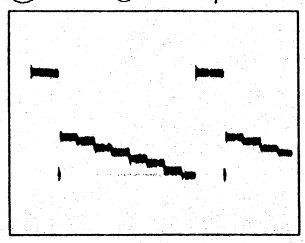
48 Q626 Ⓔ 0.1V/20µs



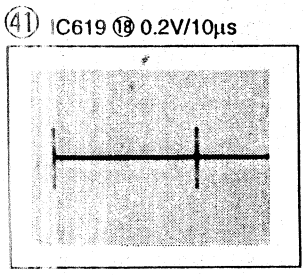
40 Q632 Ⓔ 0.2V/10µs



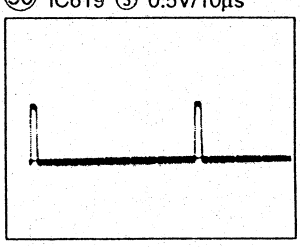
49 IC616 ⑭ 0.2V/10µs



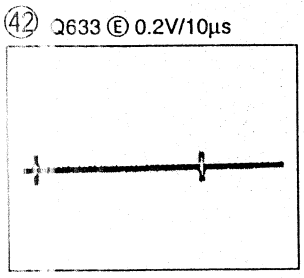
41 IC619 ⑱ 0.2V/10µs



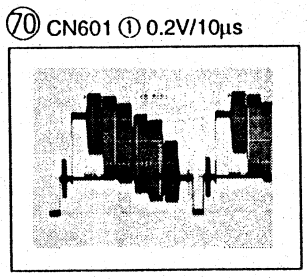
50 IC619 ③ 0.5V/10µs



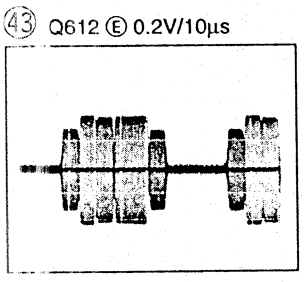
42 Q633 Ⓔ 0.2V/10µs



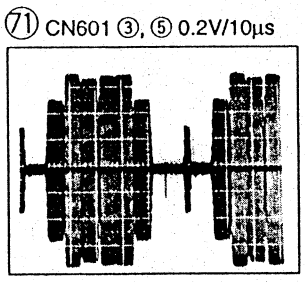
70 CN601 ① 0.2V/10µs



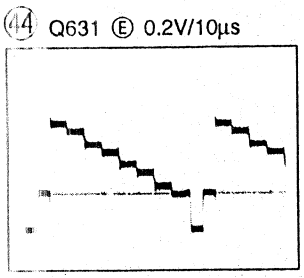
43 Q612 Ⓔ 0.2V/10µs



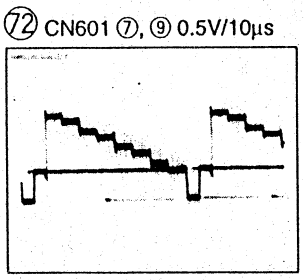
71 CN601 ③, ⑤ 0.2V/10µs



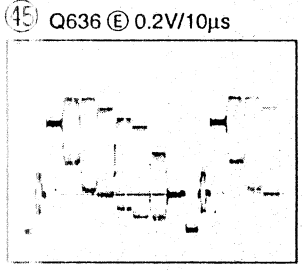
44 Q631 Ⓔ 0.2V/10µs



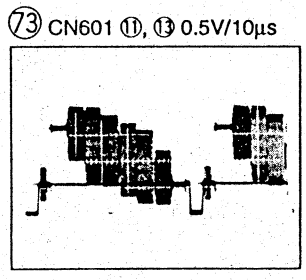
72 CN601 ⑦, ⑨ 0.5V/10µs



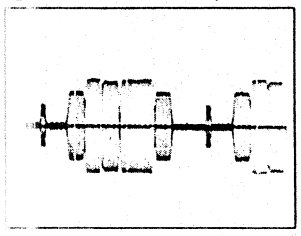
45 Q636 Ⓔ 0.2V/10µs



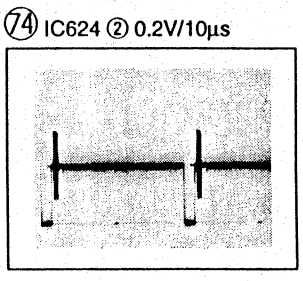
73 CN601 ⑪, ⑬ 0.5V/10µs



46 Q630 Ⓔ 0.2V/10µs



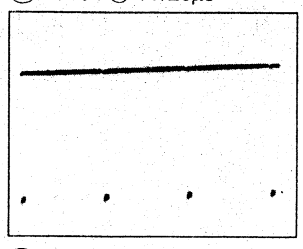
74 IC624 ② 0.2V/10µs



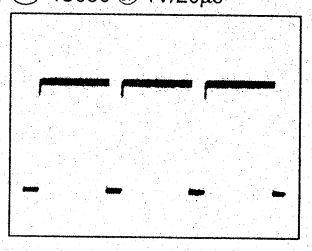
● **SIGNAL PATH (ANALOG)**

VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
⇨	⇨	⇨	

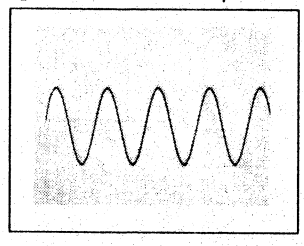
⑪ IC104 ⑧ 1V/20µs



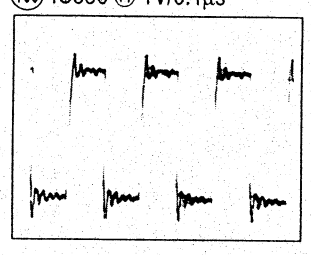
⑤③ IC950 ⑥⑦ 1V/20µs



⑫ IC104 ⑩ 0. 5V/0.1µs



⑩⑧ IC950 ⑪ 1V/0.1µs



DV-19 (6/7) (VIDEO (6/7)) SCHEMATIC DIAGRAM • See page 4-82 for PRINTED WIRING BOARD

– Ref No. DV-19 BOARD : 7,000 Seriese –

DV-19 BOARD (6/7)

IC951
M.M

IC955
AND

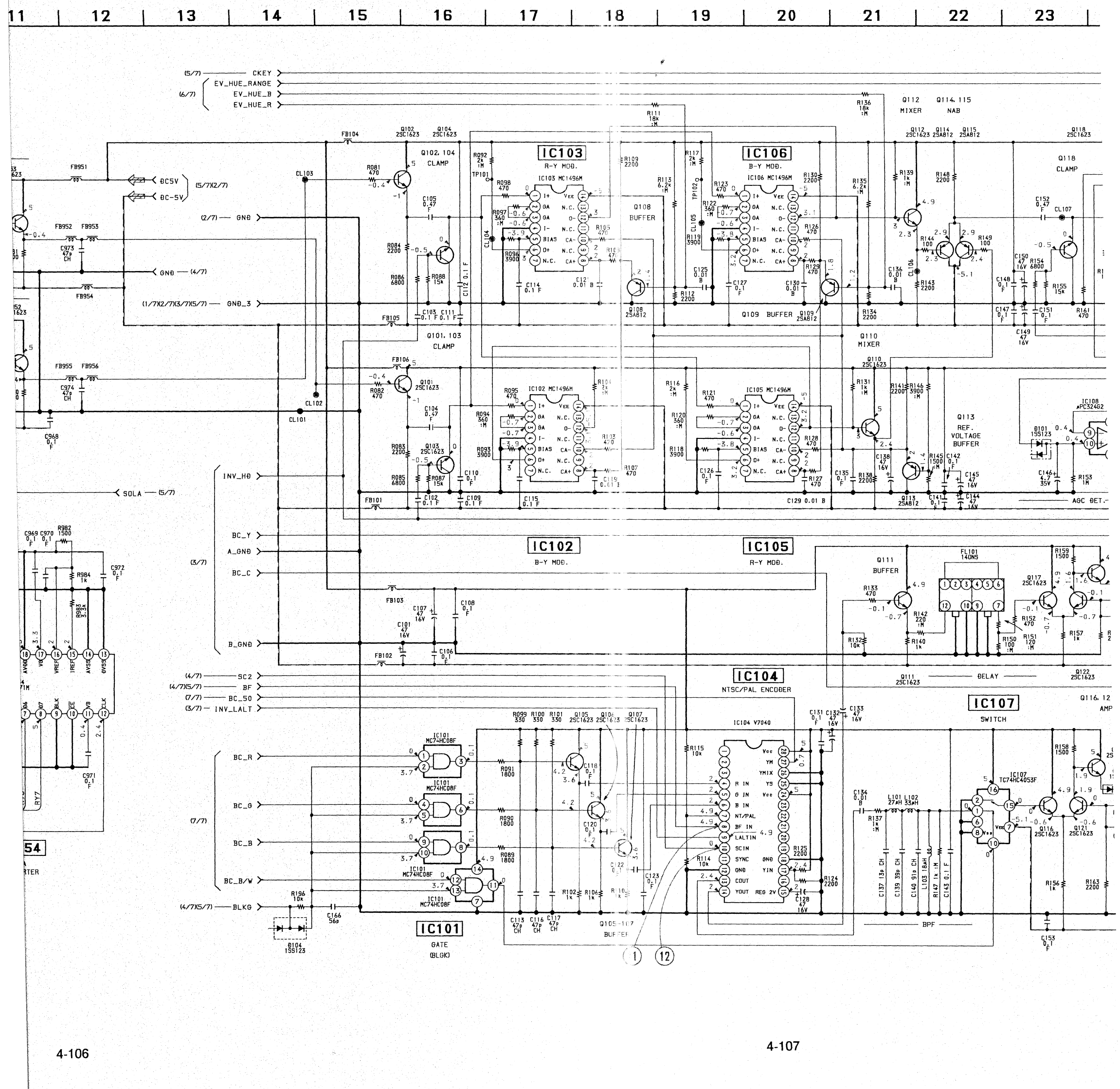
IC950
IC950
MB620461
LUMI KEY/
CHROMA KEY

IC952
Đ/A
CONVERTER

IC954
Đ/A
CONVERTER

IDEO (6/7)

11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23



18 19 20 21 22 23 24 25 26 27 28 29

A B C D E F G H I J K

IC103 Y MOD. MC1496M

IC106 B-Y MOD. IC106 MC1496M

IC105 R-Y MOD. IC105 MC1496M

IC104 NTSC/PAL ENCODER IC104 V7040

IC109 VCA

IC110 BUFFER

IC107 SWITCH

IC108 AGC DET. AMP

Q108 BUFFER

Q109 BUFFER

Q110 MIXER

Q112 MIXER

Q114, 115 NAB

Q113 REF. VOLTAGE BUFFER

Q118 CLAMP

Q123, 124 CLAMP

Q125 BUFFER

Q126-128 AMP

Q130, 131 UPPER, LOWER LIMITER

Q129 CLAMP

Q111 BUFFER

Q117, 120, 122 AMP

Q116, 121, 119 AMP

Q105-107 BUFFER

FL101 140N5

DELAY

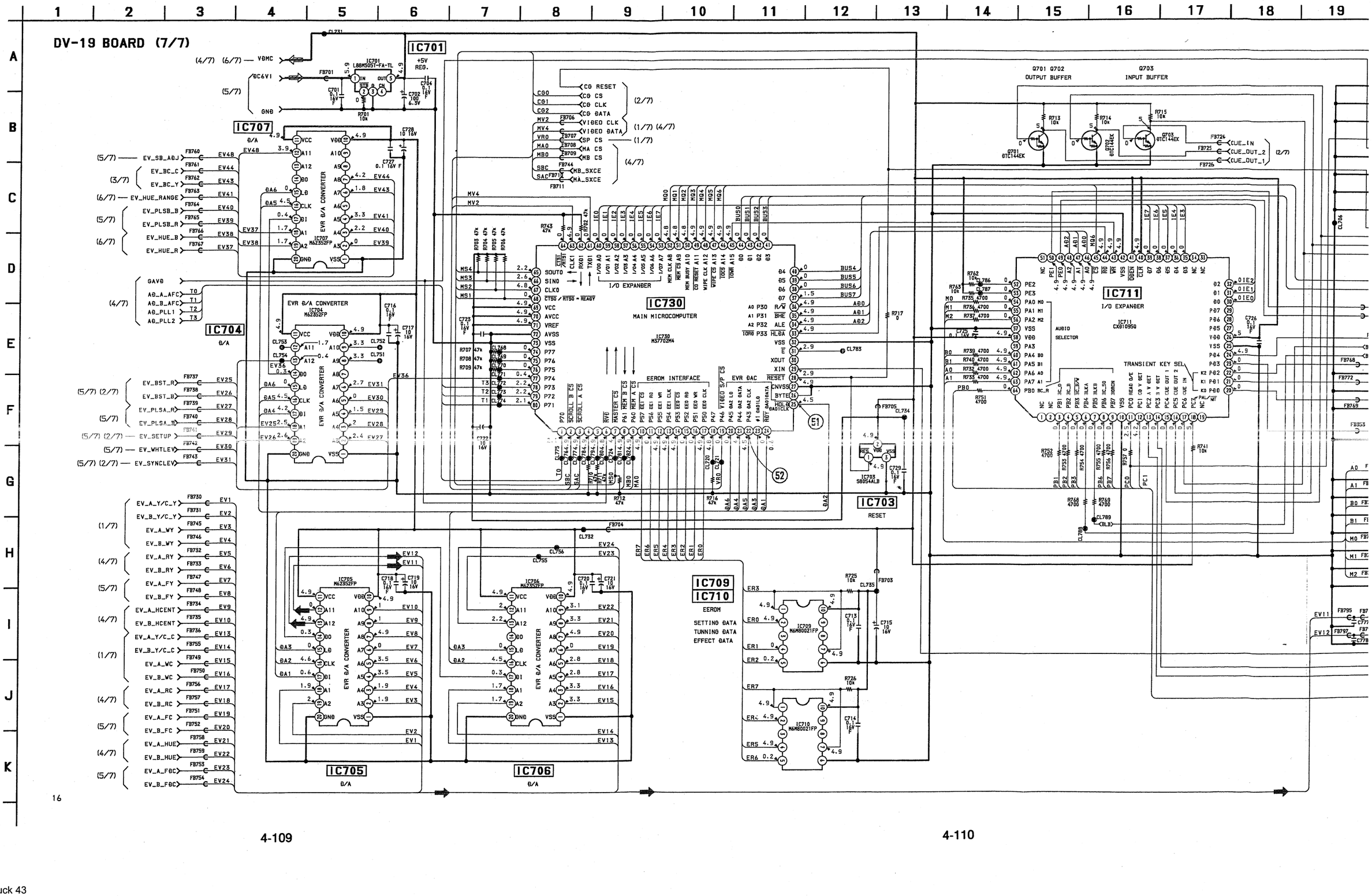
BPF

AGC DET.

AMP

DV-19 (7/7) (VIDEO (7/7)) SCHEMATIC DIAGRAM • See page 4-82 for PRINTED WIRING BOARD

– Ref No. DV-19 BOARD : 7,000 Seriese –



• SIGNAL PATH (ANALOG)

VIDEO SIGNAL			AUDIO SIGNAL
CHROMA	Y	Y/CHROMA	
			➡

51 IC730 ㉕ 1V/2ms

52 IC730 ㉒ 1V/2ms

69 CN701 ⑮ 1V/5ms

IC730 MAIN MICROCOMPUTER

IC739 M37702M4

I/O EXPANDER

EEROM INTERFACE

IC711 I/O EXPANDER

IC711 CXB1095Q

AUDIO SELECTOR

TRANSIENT KEY SEL

IC703 RESET

S8054ALB

IC709 IC710 EEROM

SETTING DATA
TUNNING DATA
EFFECT DATA

IC709 M6M80021FP

IC710 M6M80021FP

Q701 Q702 OUTPUT BUFFER

Q703 INPUT BUFFER

Q701 DTC144EK

Q702 DTC144EK

Q703 DTC144EK

CN701 21P

21	READY
20	GND
19	CG DATA
18	GND
17	CG CS
16	GND
15	CG SCK
14	R E/O
13	RVD
12	GND
11	DATA FROM MASTER
10	GND
9	DATA TO MASTER
8	GND
7	SCK
6	GND
5	MASTER CS
4	RESET
3	CUE OUT 1
2	CUE OUT 2
1	CUE IN

TO CP-64 BOARD CN500 (See page 4-18)

CN702

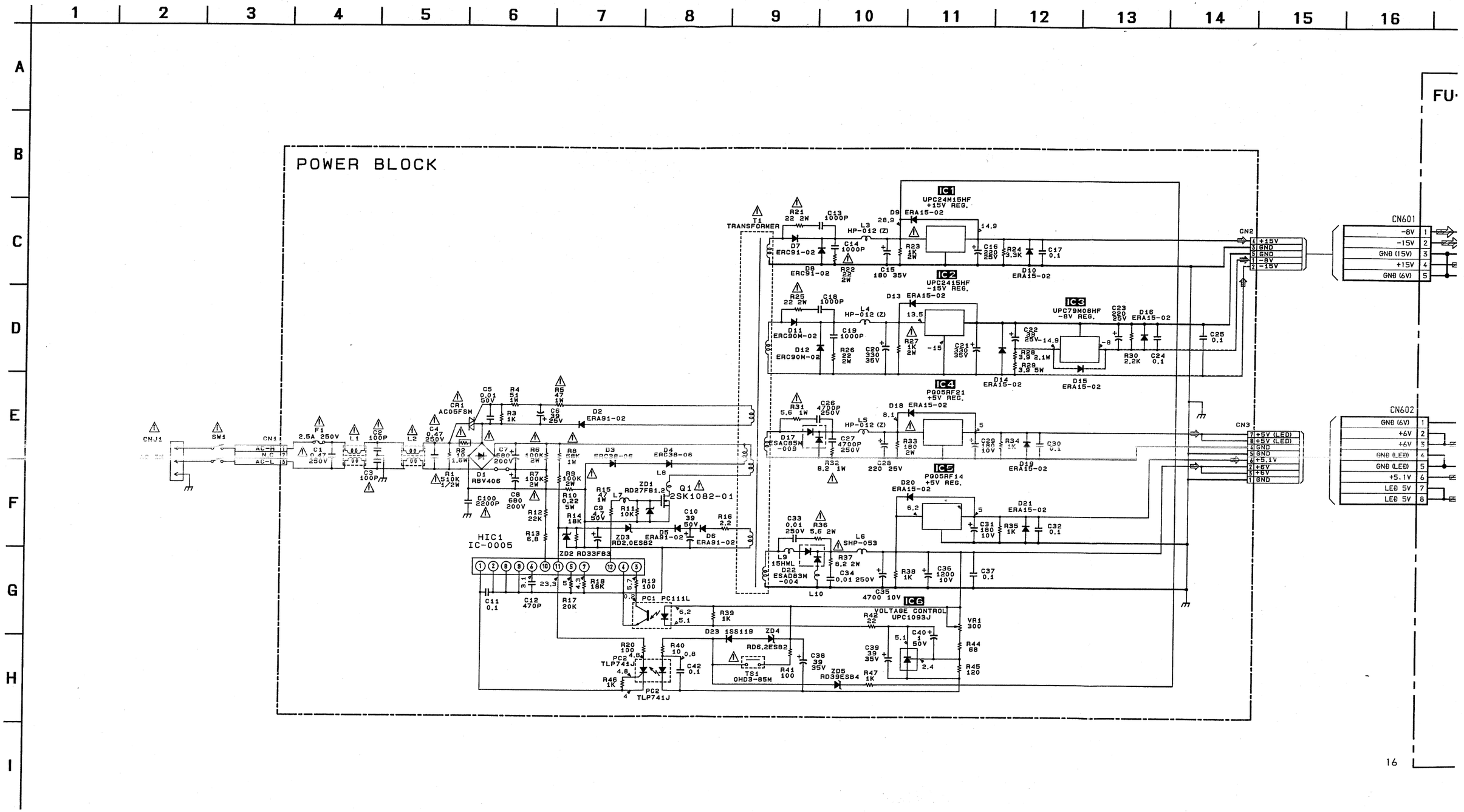
10	AU SEL A0
9	AU SEL A1
8	AU SEL B0
7	AU SEL B1
6	M-OUT SEL 0
5	M-OUT SEL 1
4	M-OUT SEL 2
3	GND
2	EV AUDIO A
1	EV AUDIO B

TO AM-32 BOARD CN003 (See page 4-71)

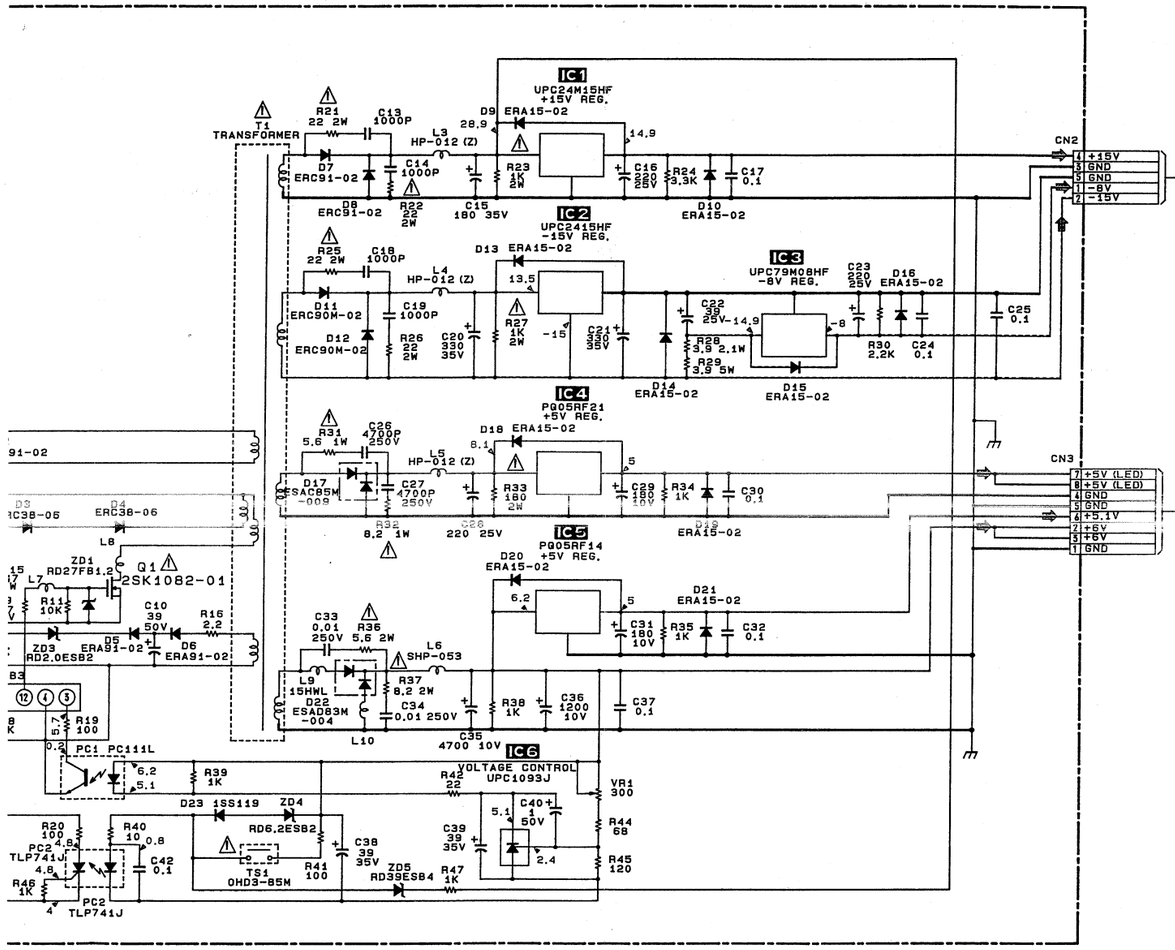
FXE-100P

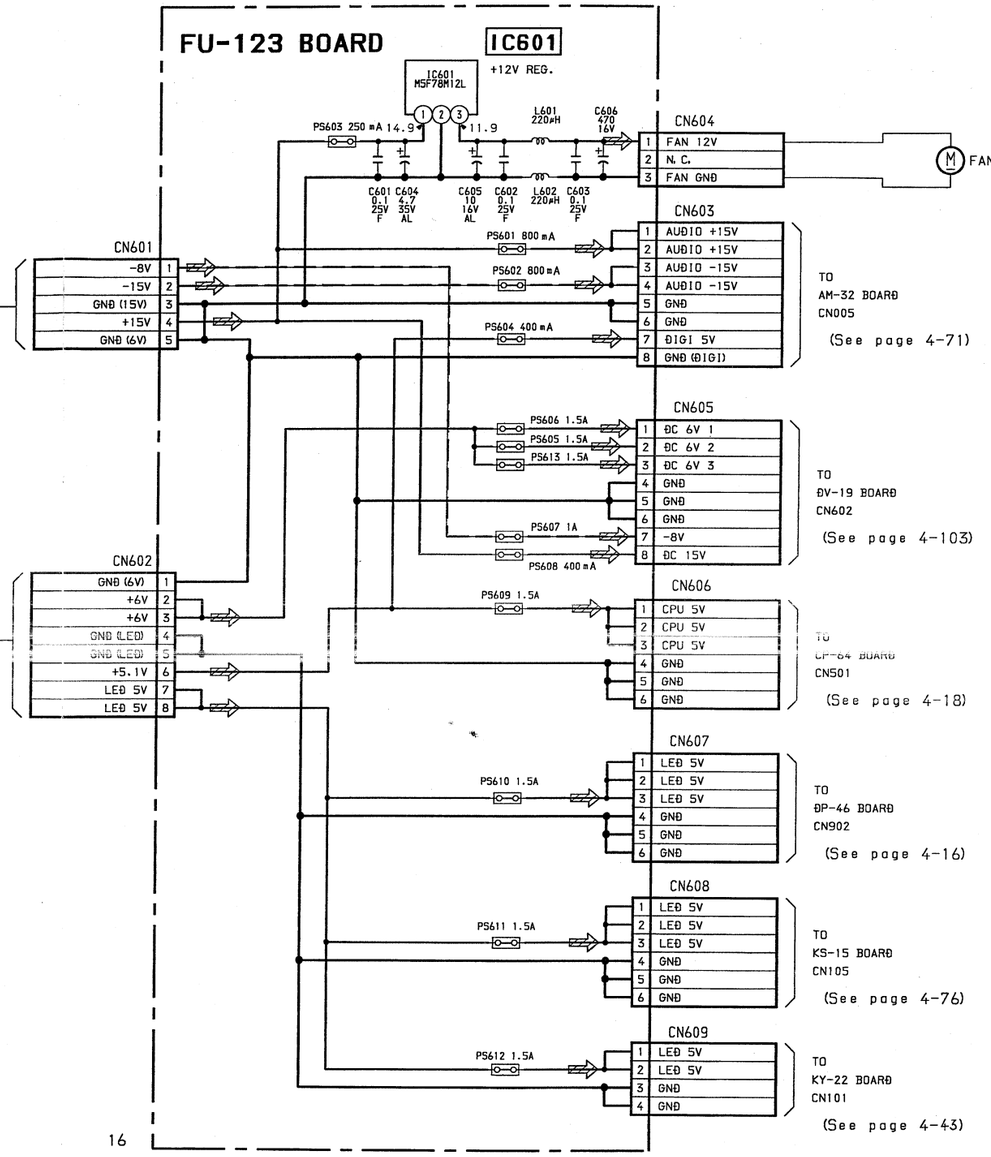
FU-123 (FUSE) /POWER BLOCK SCHEMATIC DIAGRAM

– Ref No. FU-123 BOARD : 3,000 Seriese –



V E-V13317 / Druck 45



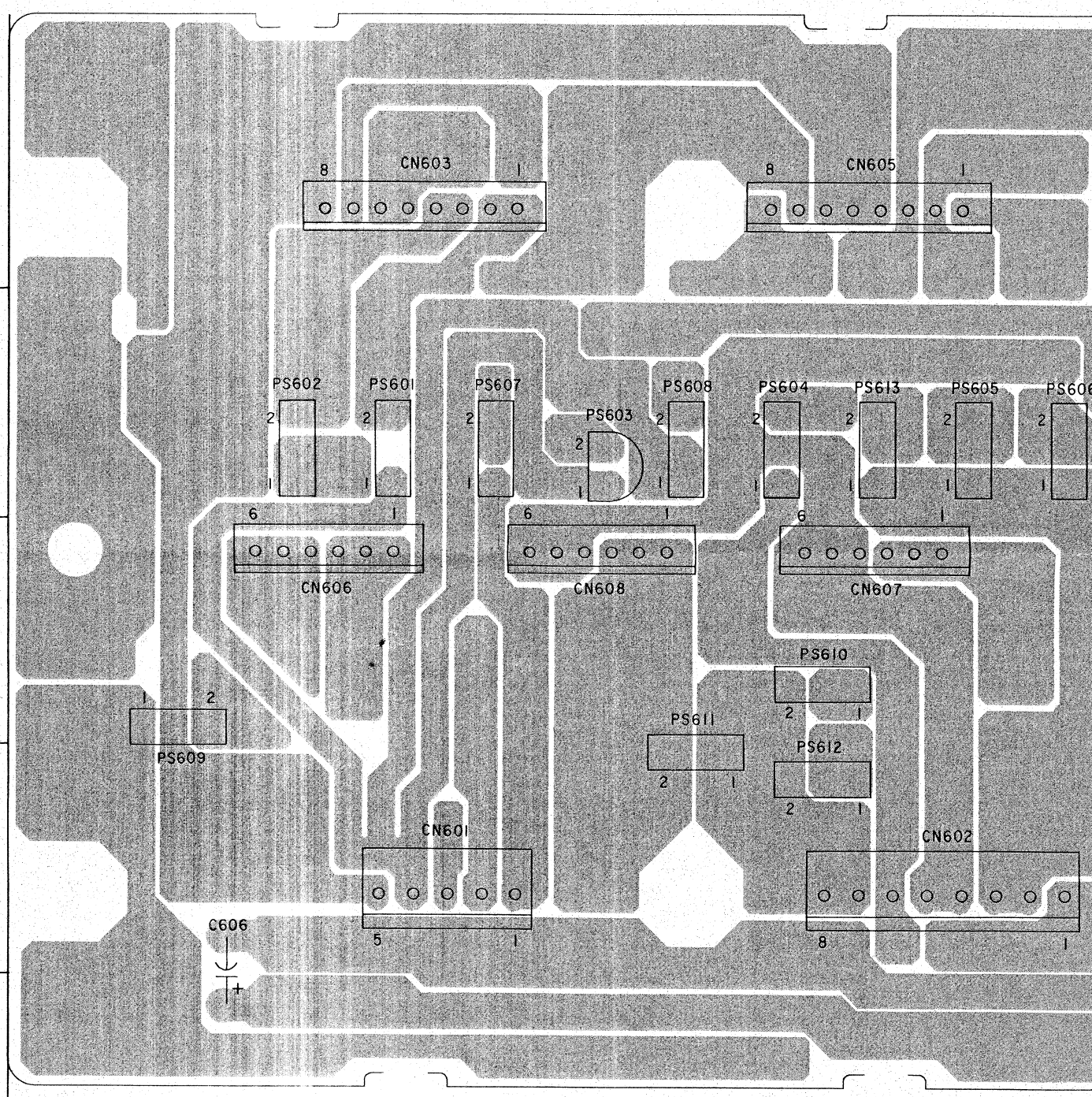


Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

FU-123 (FUSE) /POWER BLOCK PRINTED WIRING BOARD

– Ref No. FU-123 BOARD : 3,000 Seriese –

FU-123 BOARD (SIDE A)



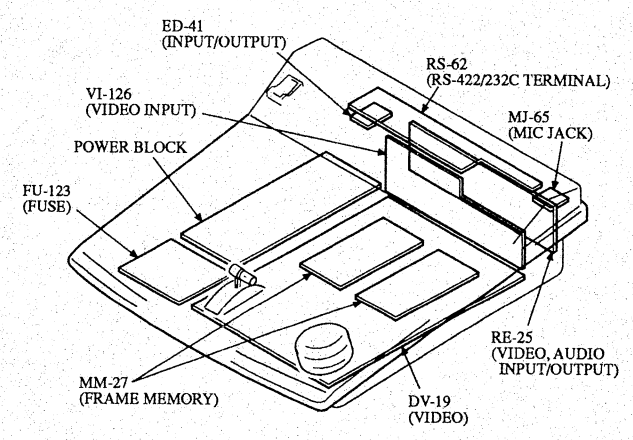
POWER BOARD

FU-123 BOARD

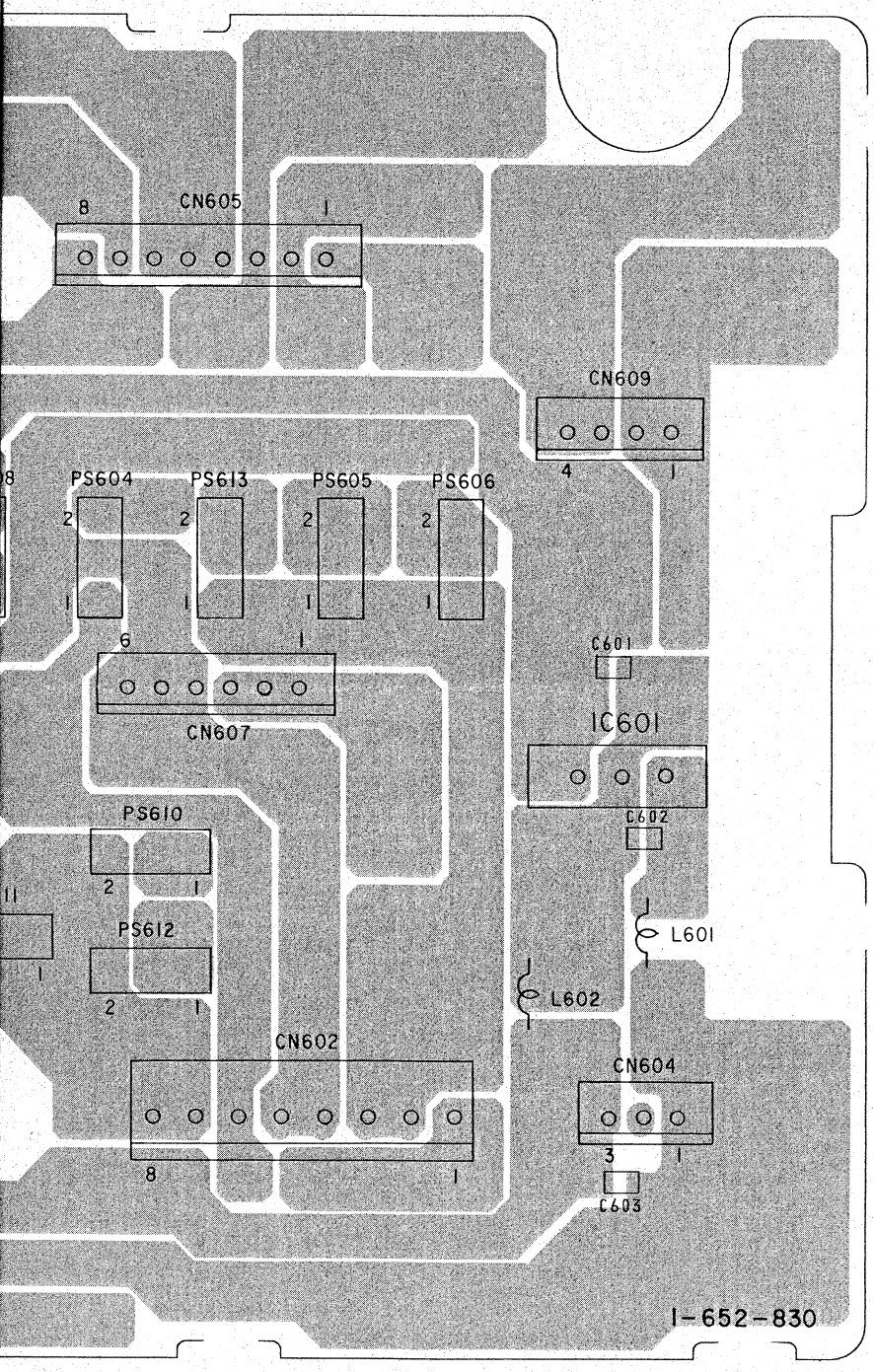
CN601	D-2
CN602	D-4
CN603	A-2
CN604	D-6
CN605	A-4
CN606	C-2
CN607	C-4
CN608	C-3
CN609	B-6
IC601	C-6

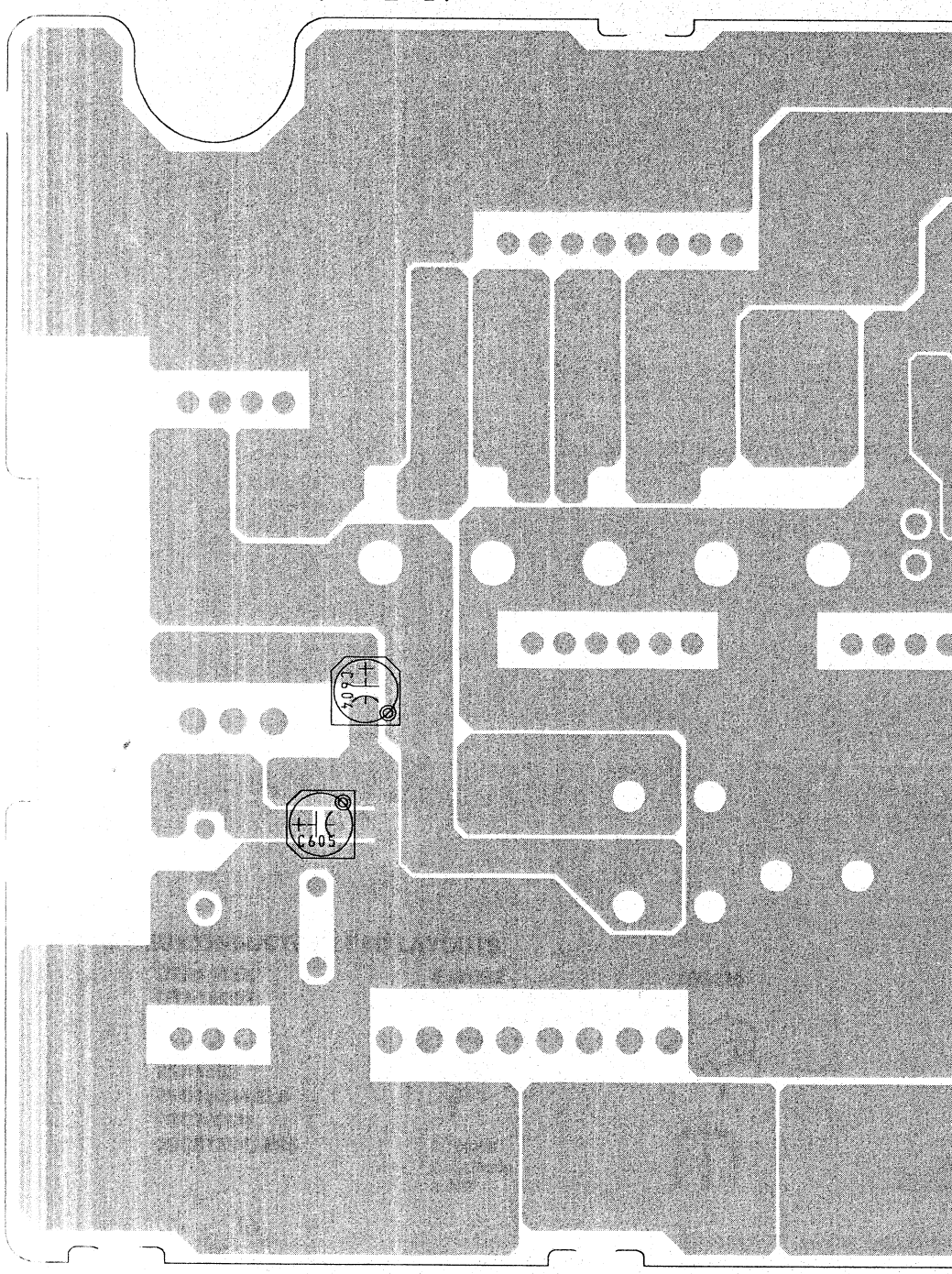
POWER BLOCK

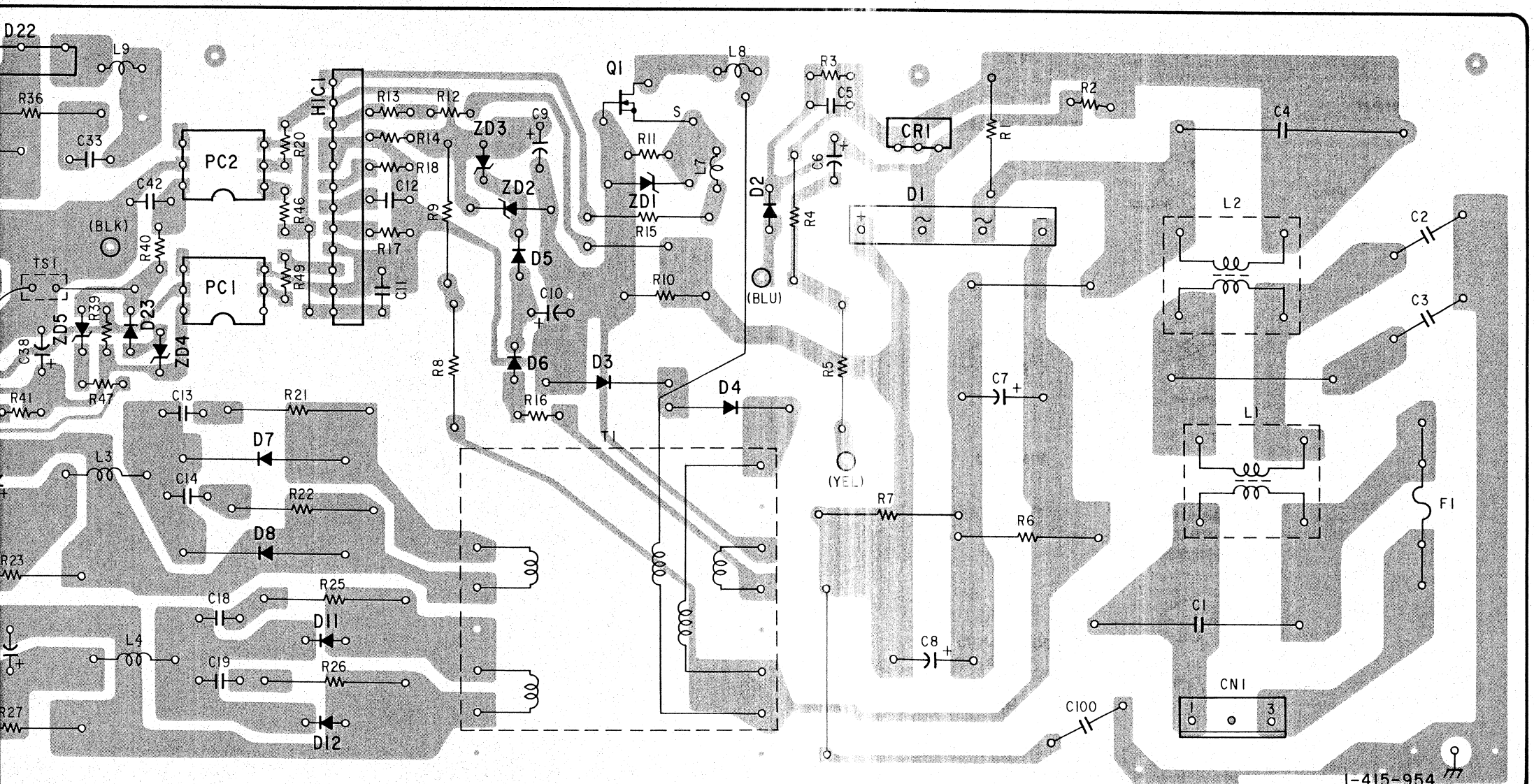
CN001	I-10
CN002	H-1
CN003	G-1
D001	G-8
D002	G-7
D003	G-7
D004	H-7
D005	G-6
D006	G-6
D007	H-5
D008	H-5
D009	H-3
D010	H-2
D011	I-5
D012	I-5
D013	I-3
D014	H-1
D015	I-2
D016	I-1
D017	F-2
D018	F-2
D019	F-1
D020	F-1
D021	F-1
D022	F-4
D023	G-4
IC001	H-3
IC002	I-3
IC003	I-2
IC004	F-2
IC005	F-1
IC006	H-2
Q001	F-7
ZD001	F-7
ZD002	F-6
ZD003	F-6
ZD004	G-4
ZD005	G-4



FU-123 BOARD (SIDE B)

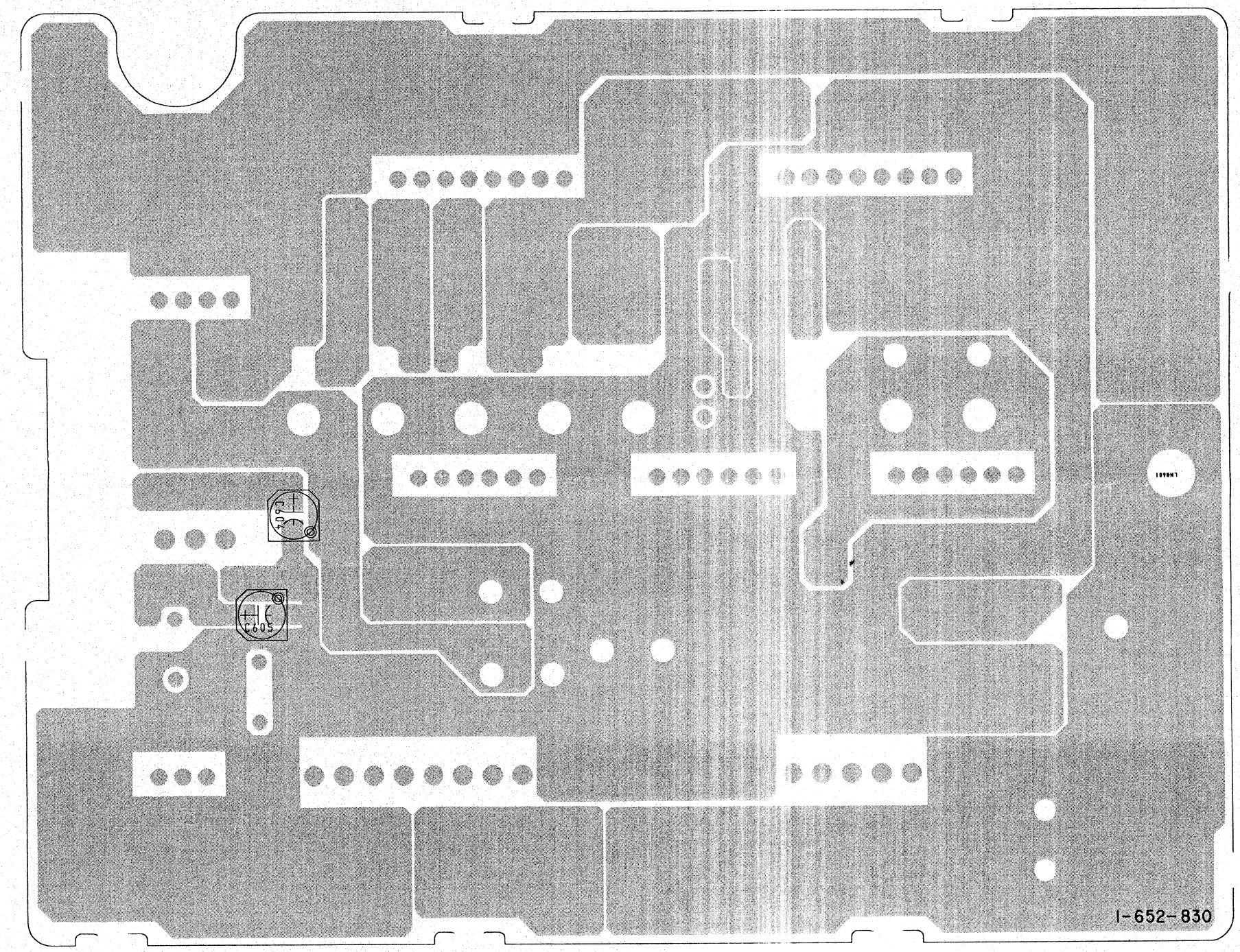


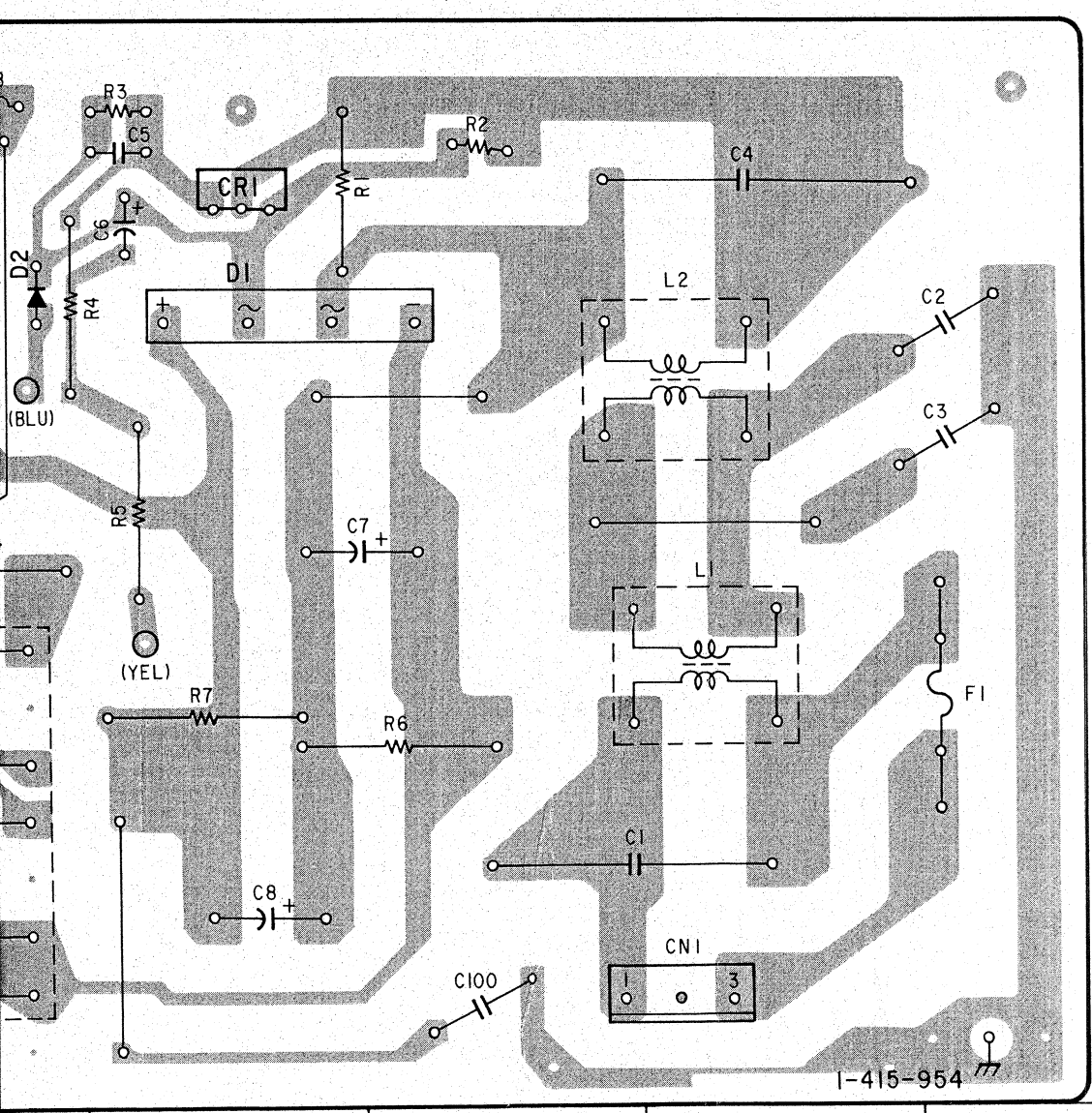




4 5 6 7 8 9 10 11

FU-123 BOARD (SIDE B)





8 9 10 11 12 13

• Main Microcomputer (DV-19 Board IC730:M37702M4)

Pin No.	Pin Name	I/O	Description
1	AD A AFC		A/D channel 0 LINE A AFC voltage check pin
2	SCROLL B CS	O	MM-27 (B) IC chip select
3	SCROLL A CS	O	MM-27 (A) IC chip select
4			Not used
5			Not used
6	RVD	I	Read system VD interrupt pin
7	MASTER CS	I	Chip select interrupt pin from CP-64 board IC500
8	MEM B CS	O	MM-27 (B) IC301 chip select
9	MEM A CS	O	MM-27 (A) IC301 chip select
10	EE1 CS	O	EEROM1 chip select
11	EE1 RD	I	EEROM1 read data input
12	EE1 WR	O	EEROM1 write data output
13	EE1 CLK	O	EEROM1 clock
14	EE0 CS	O	EEROM0 chip select
15	EE0 RD	I	EEROM0 read data input
16	EE0 WR	O	EEROM0 write data output
17	EE0 CLK	O	EEROM0 Clock
18			Not used
19	VIDEO S/P CS	O	VI-126 IC208/209 serial-parallel chip select
20	DA2 LD	O	DA converter 2/3 data load timing output
21	DA2 DATA	O	DA converter 2/3 data output
22	DA2 CLK	O	DA converter 2/3 shift clock output
23	DA01 LD	O	DA converter 0/1 data load timing output
24	DA01 DATA	O	DA converter 0/1 data output
25	DA01 CLK	O	DA converter 0/1 shift clock output
26	BYTE	I	BYTE/WORD mode select pin (GND)
27	CNVSS	I	GND
28	RESET	I	Reset pin (L : reset H : operation starts.)
29	XIN	I	CPU main clock input pin (16MHz)
30	XOUT	O	CPU clock output pin (not used)
31		O	Not used
32	VSS	I	GND
33	IORD	O	I/O expander (IC711) data read timing
34	A2	O	I/O expander (IC711) address bus A2
35	A1	O	I/O expander (IC711) address bus A1
36	A0	O	I/O expander (IC711) address bus A0
37	D7	O	Wipe microprocessor, memory microprocessor data bus D7
38	D6	O	Wipe microprocessor, memory microprocessor data bus D6
39	D5	O	Wipe microprocessor, memory microprocessor data bus D5
40	D4	O	Wipe microprocessor, memory microprocessor data bus D4
41	D3	O	Wipe microprocessor, memory microprocessor data bus D3
42	D2	O	Wipe microprocessor, memory microprocessor data bus D2
43	D1	O	Wipe microprocessor, memory microprocessor data bus D1
44	D0	O	Wipe microprocessor, memory microprocessor data bus D0

Pin No.	Pin Name	I/O	Description
45	IOWR	O	I/O expander (IC711) data write timing
46	IOCS	O	I/O expander (IC711) chip select
47	WIPE CS	O	Wipe microprocessor chip select
48	WIPE CLK	O	Wipe microprocessor data load timing clock
49	CO RESET	O	Reset pulse output to wipe microprocessor, memory microprocessor
50	MEM BUSY	I	Memory microprocessor busy (notifying the period of time when data reception is impossible)
51	MEM CS	O	Memory microprocessor chip select
52	MEM CLK	O	Memory microprocessor data load timing clock
53	I/O7	I/O	I/O expander data bus D7
54	I/O6	I/O	I/O expander data bus D6
55	I/O5	I/O	I/O expander data bus D5
56	I/O4	I/O	I/O expander data bus D4
57	I/O3	I/O	I/O expander data bus D3
58	I/O2	I/O	I/O expander data bus D2
59	I/O1	I/O	I/O expander data bus D1
60	I/O0	I/O	I/O expander data bus D0
61	TXD1	O	Video signal serial data (MM-27, VI-126)
62	RXD1	I	Serial data input (not used)
63	CLK1	O	Video signal serial transfer clock
64	RTS1 • CTS1	I/O	Serial port 1 send/receive status (not used)
65	SOUT0	O	Master microprocessor (CP64IC500) serial communication data output
66	SIN0	I	Master microprocessor (CP64IC500) serial communication data input
67	CLK0	I	Master microprocessor (CP64IC500) serial communication data clock input
68	RTS0	O	Master microprocessor (CP64IC500) serial communication data enable (ready) pin
69	VCC	I	Digital circuit power supply (5V)
70	AVCC	I	Analog circuit power supply (A/D converter 5V)
71	VREF	I	Conversion reference voltage (5V) for A/D converter
72	AVSS	I	Analog circuit GND
73	VSS	I	Digital circuit GND
74	AN7		A/D converter channel 7 input pin (not used)
75	AN6		A/D converter channel 6 input pin (not used)
76	AN5		A/D converter channel 5 input pin (not used)
77	AN4		Channel 4 EVR36 analog port voltage monitoring
78	AN3		Channel 3 burst SC PLL control voltage check pin
79	AN2		Channel 2 PAL 908FH control voltage check pin
80	AN1		Channel 1 LINE B AFC voltage check pin

• I/O Expander (DV-19 board IC711:CXD1095Q)

Pin No.	Pin Name	I/O	Description
1	No connection		No connection
2	No connection		No connection
3	BC G	O	Border color (green)
4	BC B	O	Border color (blue)
5	BC B/W	O	Border color (black/white)
6	BLKA	O	Back color (H : black L : video) LINE A
7	BLKB	O	Back color (H : black L : video) LINE B
8	BC 50	O	Border color (luminance level 50 % : -6dB)
9	BDRON	O	Border ON (border during wipe)
10	VSS	I	GND
11	READ O/E	I	Read circuit ODD/EVEN (L : ODD H : EVEN)
12	CG V DET	I	Video signal exists or not in the monitor output circuit (H : exist L : not exist)
13	A V DET	I	LINE A : video signal exists or not (H : exist L : not exist)
14	B V DET	I	LINE B : video signal exists or not (H : exist L : not exist)
15	CUE OUT 1	I	CUE OUT 1 signal timing (master microprocessor outputs the signal)
16	CUE OUT 2	I	CUE OUT 2 signal timing (master microprocessor outputs the signal)
17	CUE IN	I	CUE IN signal timing (input from external peripherals)
18	PAL/NT	I	H = PAL L = NTSC
19	No connection		No connection
20	K0	O	Wipe or mix key select BIT 0
21	K1	O	Wipe or mix key select BIT 1
22	K2	O	Wipe or mix key select BIT 2
23	SOLA ON	O	Gate array key of the chroma key and luminance key switch ON
24	MOUT SEL	O	Monitor output select (H : program out L : source)
25	VSS	I	GND
26	VDD	I	Power supply (5V)
27			Not used
28			Not used
29			Not used
30	D0	I/O	Main microprocessor data bus D0
31	D1	I/O	Main microprocessor data bus D1
32	D2	I/O	Main microprocessor data bus D2
33	No connection		No connection
34	No connection		No connection
35	D3	I/O	Main microprocessor data bus D3
36	D4	I/O	Main microprocessor data bus D4
37	D5	I/O	Main microprocessor data bus D5
38	D6	I/O	Main microprocessor data bus D6
39	D7	I/O	Main microprocessor data bus D7
40	CLR	I	Clear pin
41	ODEN	I	High output impedance at each port
42	VSS	I	GND
43	WR	I	Main microprocessor communication timing (write)
44	RD	I	Main microprocessor communication timing (read)

Pin No.	Pin Name	I/O	Description
45	CS	I	Main microprocessor communication chip select
46	A0	I	Main microprocessor communication address bus A0
47	A1	I	Main microprocessor communication address bus A1
48	A2	I	Main microprocessor communication address bus A2
49			Not used
50			Not used
51	No connection		No connection
52			Not used
53			Not used
54	M0	O	Audio monitor output select BIT 0
55	M1	O	Audio monitor output select BIT 1
56	M2	O	Audio monitor output select BIT 2
57	VSS	I	GND
58	VDD	I	Power supply (5V)
59			Not used
60	B0	O	Audio B bus source select BIT 0
61	B1	O	Audio B bus source select BIT 1
62	A0	O	Audio A bus source select BIT 0
63	A1	O	Audio A bus source select BIT 1
64	BC R	O	Border color (red)

• DA Converter (DV-19 board IC704:M62352)

Pin No.	Pin Name	Description
2	EV27	Color plus LINE A (red)
3	EV28	Color plus LINE A (blue)
4	EV29	Video setup level
5	EV30	Video white level
6	EV31	Video sync level
7		
8		
9		
12		
13	EV36	Connected to the main microprocessor (for checking D/A converter operation)
18	EV25	Color correction (red)
19	EV26	Color correction (blue)

• DA Converter (DV-19 board IC705:M62352)

Pin No.	Pin Name	Description
2	EV3	Write circuit Y level adjustment LINE A
3	EV4	Write circuit Y level adjustment LINE B
4	EV5	Read circuit Y level adjustment LINE A
5	EV6	Read circuit Y level adjustment LINE B
6	EV7	Fader Y level adjustment LINE A (not used)
7	EV8	Fader Y level adjustment LINE B (not used)
8	EV9	Center adjustment LINE A
9	EV10	Center adjustment LINE B
12	EV11	Audio attenuation level LINE A
13	EV12	Audio attenuation level LINE B
18	EV1	Y/C separation Y level adjustment LINE A
19	EV2	Y/C separation Y level adjustment LINE B

• DA Converter (DV-19 board IC706:M62352)

Pin No.	Pin Name	Description
2	EV15	Write circuit C level adjustment LINE A
3	EV16	Write circuit C level adjustment LINE B
4	EV17	Read circuit C level adjustment LINE A
5	EV18	Read circuit C level adjustment LINE B
6	EV19	Fader C level adjustment LINE A (not used)
7	EV20	Fader C level adjustment LINE B (not used)
8	EV21	HUE adjustment LINE A
9	EV22	HUE adjustment LINE B
12	EV23	Video mix level LINE A
13	EV24	Video mix level LINE B
18	EV13	Y/C separation C level adjustment LINE A
19	EV14	Y/C separation C level adjustment LINE B

• DA Converter (DV-19 board IC707:M62352)

Pin No.	Pin Name	Description
2	EV39	Color plus LINE B (red)
3	EV40	Color plus LINE B (blue)
4	EV41	Chroma key comparator level (threshold level)
5		
6	EV43	Border color luminance level adjustment
7	EV44	Border color chrominance level adjustment
8		
9		
12	EV48	A-bus APL adjustment during soft wipe
13		
18	EV37	Chroma key color information (red)
19	EV38	Chroma key color information (blue)

• Master Microcomputer (CP-64 board IC500:M37732S4AFP)

Pin No.	Pin Name	I/O	Description
1	AN0	I	CXD1500Q (67pin) during "H" output
2	TB2IN	O	CXD1500Q (67pin) during "L" output
3	TB1IN	O	Not used
4	TB0IN	O	Not used
5	$\overline{\text{UART2 INT}}$	I	"L" level interrupt
6	$\overline{\text{CXD15 INT}}$	I	"L" level interrupt
7	$\overline{\text{UART1 INT}}$	I	"L" level interrupt
8	TA4IN	O	Not used
9	TA4OUT	O	Not used
10	TA3IN	I	Not used
11	BUZZER OUT	O	BUZZER OUT
12	TA2IN	I	Not used
13	TA2OUT	O	Not used
14	TA1IN	I	Not used
15	TA1OUT	O	Not used
16	RVD	I	↓ edge interrupt
17	TA0OUT	O	Not used
18	$\overline{\text{CG CS}}$	O	Chip select (active "L")
19	$\overline{\text{EE CS}}$	O	Chip select (active "L")
20	$\overline{\text{BUSY}}$	I	READY, $\overline{\text{BUSY}}$ status signal input
21	EERST	O	Reset output (active "H")
22	$\overline{\text{OSDCS}}$	O	Chip select (active "L")
23	0	O	X/2 output
24	$\overline{\text{RDY}}$	I	CPU is ready state during "L" level
25	$\overline{\text{HOLD}}$	I	
26	BYTE	I	External data width →16 bit width
27	CNVSS	I	
28	$\overline{\text{RESET}}$	I	Reset input
29	X IN	I	Input/output to and from internal clock generator circuit (16MHz)
30	X OUT	O	Input/output to and from internal clock generator circuit (16MHz)
31	$\overline{\text{E}}$	O	Reading the data or the instruction code, or data write is executed during "L" level.
32	VSS		
33	$\overline{\text{HLDA}}$	O	"L" level is output during holding time.
34	ALE	O	Used to read address only from the multiplexed signal of address and data.
35	$\overline{\text{BHE}}$	O	When accessing to odd numbered address, this pin goes to "L" level.
36	R/$\overline{\text{W}}$	O	Reading during "H"level. Writing during "L"level.
37	A23/D7	I/O	When $\overline{\text{E}}$ output is "L", the data bus lower 8 bits are output. When $\overline{\text{E}}$ output is "H", the address bus higher 8 bits are output.
38	A22/D6	I/O	
39	A21/D5	I/O	
40	A20/D4	I/O	
41	A19/D3	I/O	
42	A18/D2	I/O	
43	A17/D1	I/O	
44	A16/D0	I/O	

Pin No.	Pin Name	I/O	Description
45	A15/D15	I/O	When $\overline{\text{E}}$ output is "L", the data bus higher 8 bits are output. When $\overline{\text{E}}$ output is "H", the address bus middle 8 bits are output.
46	A14/D14	I/O	
47	A13/D13	I/O	
48	A12/D12	I/O	
49	A11/D11	I/O	
50	A10/D10	I/O	
51	A9/D9	I/O	
52	A8/D8	I/O	
53	A7	O	The address bus lower 8 bits are output.
54	A6	O	
55	A5	O	
56	A4	O	
57	A3	O	
58	A2	O	
59	A1	O	
60	A0	O	
61	TXD1	O	Serial data output pin
62	RXD1	I	Serial data input pin
63	CLK1	O	Serial clock output pin
64	$\overline{\text{RTS1}}$	O	
65	TXD0	O	Serial data output pin
66	RXD0	I	Serial data input pin
67	CLK0	O	Serial clock output pin
68	$\overline{\text{CTS0}}$	I	
69	VCC		Receive status
70	AVCC		Power voltage input pin to the A/D converter
71	VREF	I	Reference voltage input pin to the A/D converter
72	AVSS		Power voltage input pin to the A/D converter
73	VSS		
74	AN7	I	
75	AN6	I	During "H" output of CXD1500Q (67pin) During "L" output of CXD1500Q (67pin)
76	AN5	I	During "L" output of CXD1500Q (67pin) During "L" output of CXD1500Q (67pin)
77	AN4	I	During "L" output of CXD1500Q (67pin) During "L" output of CXD1500Q (67pin)
78	AN3	I	During "L" output of CXD1500Q (67pin) During "L" output of CXD1500Q (67pin)
79	AN2	I	During "L" output of CXD1500Q (67pin) During "L" output of CXD1500Q (67pin)
80	AN1	I	During "L" output of CXD1500Q (67pin) During "L" output of CXD1500Q (67pin)

• CPG, PTC, PIU, ICU (CP-64 board IC518:CXD1500Q)

Pin No.	Pin Name	I/O	Description
1	F/$\overline{X}$	I	Internal oscillator clock and external clock input select pin
2	X1	I	Connect an external crystal oscillator (14.7456MHz)
3	X2	I	Connect an external crystal oscillator (14.7456MHz)
4	OSC	O	The same frequency as the crystal oscillator is output from this pin.
5	RESET	O	Power-ON reset signal output pin
6	$\overline{RESIN}$	I	Reset input.
7	GND		
8	$\overline{RD}$	I	Read-out control common input pin
9	$\overline{WR}$	I	Write-down control common input pin
10	A0	I	Common address input pin : A1
11	A1	I	Common address input pin : A2
12	$\overline{CS\ 54}$	I	PTC block select input pin
13	$\overline{CS\ 55}$	I	PIU block select input pin
14	$\overline{CS\ 59}$	I	ICU block select input pin
15	D0	I/O	Data input and output pins between MPU and each internal functional blocks
16	D1	I/O	
17	D2	I/O	
18	D3	I/O	
19	D4	I/O	
20	D5	I/O	
21	D6	I/O	
22	D7	I/O	
23	$\overline{INTAK}$	I	
24	GND		
25	INTP0	I	"H" level interrupt
26	INTP1	I	"H" level interrupt
27	INTP2	I	"H" level interrupt
28	INTP3	I	"H" level interrupt
29	INTP4	I	Not used
30	INTP5	I	Not used
31	INTP6	I	Asynchronous type interrupt request input pin
32	INTP7	I	
33	VDD		
34	INT	O	Interrupt request output pin
35	$\overline{SV}$	I	
36	SA0	O	
37	SA1	O	
38	SA2	O	
39	CLK0	I	Clock input pin to the ϕ counter
40	GATE0	I	Input pin which controls the count inhibit and count initialize of the ϕ counter.
41	OUT0	O	614.4kHz which generates the clock rate of μPD72001
42	CLK1	I	Same as the CLK0
43	GATE1	I	Same as the GATE0
44	OUT1	O	2MHz system clock output to TMP82C79M
45	GND		
46	CLK2	I	Same as the CLK0

Pin No.	Pin Name	I/O	Description
47	GATE2	I	Same as the GATE0
48	OUT2	O	Same as the OUT0
49	DT0	I	DT0
50	DT1	I	DT1
51	DT2	I	DT2
52	DT3	I	DT3
53	DT4	I	DT4
54	DT5	I	DT5
55	H. JOG	I	H. JOG
56	FWD/REW	I	FWD/REV
57	CUE IN	I	CUE IN
58	R E/O	I	EVEN/ODD (not used)
59	P12	I	Not used
60	P13	I	Not used
61	P14	I	Not used
62	P15	I	Not used
63	P16	I	Not used
64	NT/PAL	I	NTSC/PAL = "L/H"
65	GND		
66	BUZZER ON	O	ON/OFF = "H/L"
67	CONT	O	A/D converter type select
68	CUE OUT2	O	CUE OUT2
69	CUE OUT1	O	CUE OUT1
70	$\overline{MASTER\ CS}$	O	Chip select (active "L")
71	$\overline{LED\ ON}$	O	ON/OFF = "L/H"
72	P26	O	
73	VDD		
74	P27	O	Port 2 output pin
75	CLK	O	4.9152MHz system clock output to μPD72001
76	READY	O	Output signal which is generated by synchronizing the RDY input signal.
77	RDY	I	Ready signal input pin on the system bus
78	EXFS	I	Clock signal input pin when the external clock signal is used as the oscillator.
79	PRCLK	O	2.4576MHz fundamental clock output to PTC counter # 0.
80	CKSYN	I	Input pin when multiple clock pulse generators are synchronized.

• OSD Microprocessor (CP-64 board IC501:CXP80P116Q-1)

Pin No.	Pin Name	I/O	Description
1	PA1	O	8-bit output port (port A)
2	PA0	O	8-bit output port (port A)
3	PB7	O	8-bit output port (port B)
4	PB6	O	8-bit output port (port B)
5	PB5	O	8-bit output port (port B)
6	PB4	O	8-bit output port (port B)
7	PB3	O	8-bit output port (port B)
8	PB2	O	8-bit output port (port B)
9	PB1	O	8-bit output port (port B)
10	PB0	O	8-bit output port (port B)
11	PC7	O	8-bit output port (port C)
12	PC6	O	8-bit output port (port C)
13	PC5	O	8-bit output port (port C)
14	PC4	O	8-bit output port (port C)
15	PC3	O	8-bit output port (port C)
16	PC2	O	8-bit output port (port C)
17	PC1	O	8-bit output port (port C)
18	PC0	O	8-bit output port (port C)
19	PD7	O	8-bit output port (port D)
20	PD6	O	8-bit output port (port D)
21	PD5	O	8-bit output port (port D)
22	PD4	O	8-bit output port (port D)
23	PD3	O	8-bit output port (port D)
24	DBG	O	Monitor output pin for debugging
25	$\overline{\text{CG CS}}$	O	Chip select (active "L")
26	$\overline{\text{CG SCK}}$	O	Serial clock output
27	PH3	O	4-bit output port (port H)
28	PH2	O	4-bit output port (port H)
29	PH1	O	4-bit output port (port H)
30	PH0	O	4-bit output port (port H)
31	MP	I	Single chip mode at "L" level
32	$\overline{\text{RST}}$	I	Reset input
33	VSS		
34	XTAL	O	An external crystal is connected for system clock oscillation (16MHz)
35	EXTAL	I	
36	$\overline{\text{CS0}}$	I	Chip select (active "L")
37	SI0	I	Not used
38	SO0	O	Serial data output pin
39	$\overline{\text{SCK0}}$	I	Serial clock input pin
40	$\overline{\text{CSI}}$	I	Chip select (active "L")
41	SI1	I	Serial data input pin
42	SO1	O	Serial data output pin (not used)
43	$\overline{\text{SCKI}}$	I	Serial clock input pin
44	AN7	I	Analog signal input pin to A/D converter
45	AN6	I	Analog signal input pin to A/D converter
46	AN5	I	Analog signal input pin to A/D converter

Pin No.	Pin Name	I/O	Description
47	AN4	I	Analog signal input pin to A/D converter
48	AN3	I	Analog signal input pin to A/D converter
49	AN2	I	Analog signal input pin to A/D converter
50	AN1	I	Analog signal input pin to A/D converter
51	AN0	I	Analog signal input pin to A/D converter
52	AVSS		GND pin of A/D converter
53	AVREF	I	Reference voltage input pin to A/D converter
54	AVDD		Positive power supply input to A/D converter
55	PG7	I	8 bit input port (port G)
56	PG6	I	8 bit input port (port G)
57	PG5	I	8 bit input port (port G)
58	PG4	I	8 bit input port (port G)
59	PG3	I	8 bit input port (port G)
60	PG2	I	8 bit input port (port G)
61	PG1	I	8 bit input port (port G)
62	PG0	I	
63	PE7	O	
64	PE6	O	
65	PE5	O	Port E (higher 6 bits are output exclusive 8 bit port)
66	PE4	O	
67	PE3	O	
68	PE2	O	
69	$\overline{\text{INT2}}$	I	Not used
70	$\overline{\text{INT0}}$	I	External interrupt input pin. Fall down edge active.
71	$\overline{\text{NMI}}$	I	Non-maskable interrupt request pin. Fall down edge active.
72	VDD		Positive power supply input
73	VSS		GND
74	NC		
75	PA7	O	8 bit output port (port A)
76	PA6	O	8 bit output port (port A)
77	PA5	O	8 bit output port (port A)
78	PA4	O	8 bit output port (port A)
79	PA3	O	8 bit output port (port A)
80	PA2PE7	O	8 bit output port (port A)

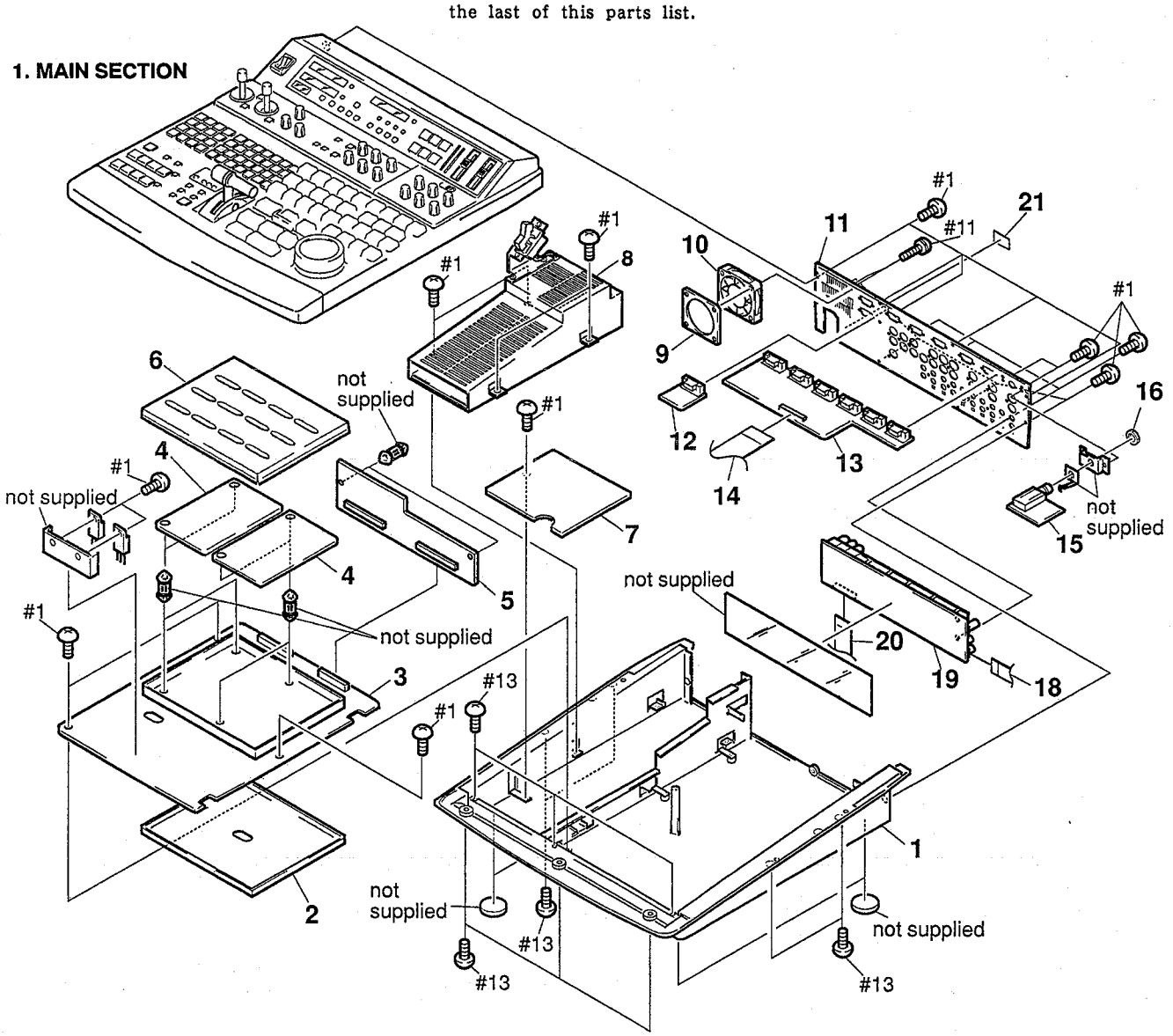
SECTION 6
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

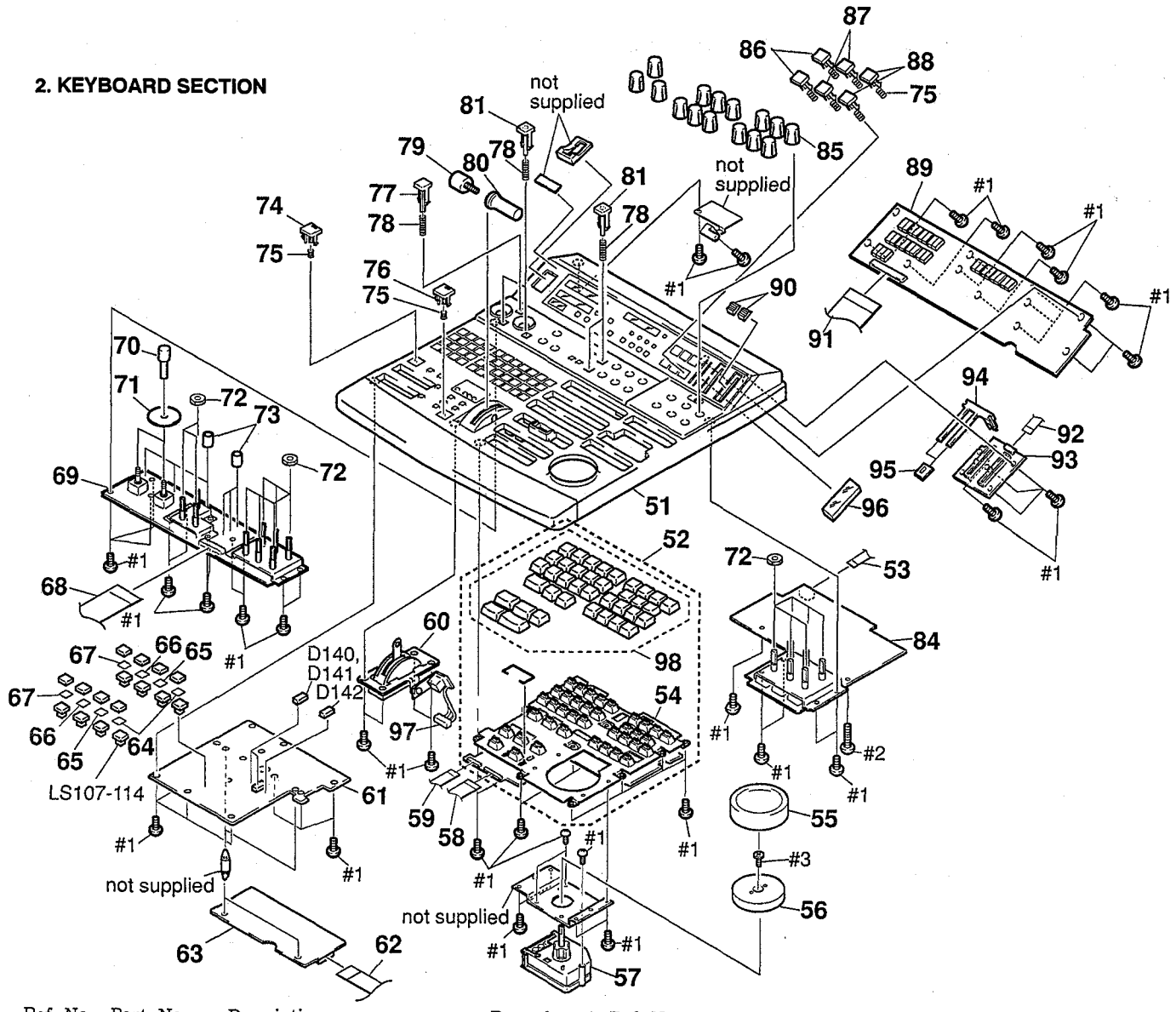
1. MAIN SECTION



Ref. No.	Part No.	Description	Remarks
* 1	X-3943-515-1	COVER ASSY, BOTTOM	
* 2	3-957-076-01	CASE (DV-19) (LOWER), SHIELD	
* 3	A-7066-121-A	DV-19 (P) BOARD, COMPLETE	
* 4	A-7066-127-A	MM-27 (P) BOARD, COMPLETE	
* 5	A-7066-126-A	VI-126 (P) BOARD, COMPLETE	
* 6	3-957-074-01	CASE (DV-19) (UPPER), SHIELD	
* 7	A-7066-120-A	FU-123 BOARD, COMPLETE	
⚠8	1-413-954-11	POWER BLOCK	
* 9	3-697-996-01	BRACKET, FAN	
10	1-541-684-31	MOTOR, DC	

Ref. No.	Part No.	Description	Remarks
* 11	3-956-990-01	PANEL, REAR	
* 12	A-7066-122-A	ED-41 BOARD, COMPLETE	
* 13	A-7066-124-A	RS-62 BOARD, COMPLETE	
14	1-751-565-11	CABLE, FLAT (FRS-14)	
* 15	A-7066-123-A	MJ-65 BOARD, COMPLETE	
16	3-684-465-01	NUT, HEXAGON	
18	1-751-560-11	CABLE, FLAT (FAI-1)	
* 19	A-7053-847-A	RE-25 BOARD, COMPLETE	
20	1-751-561-11	CABLE, FLAT (FAO-1)	
* 21	3-959-510-01	LABEL, MODEL NUMBER (NO. 2)	

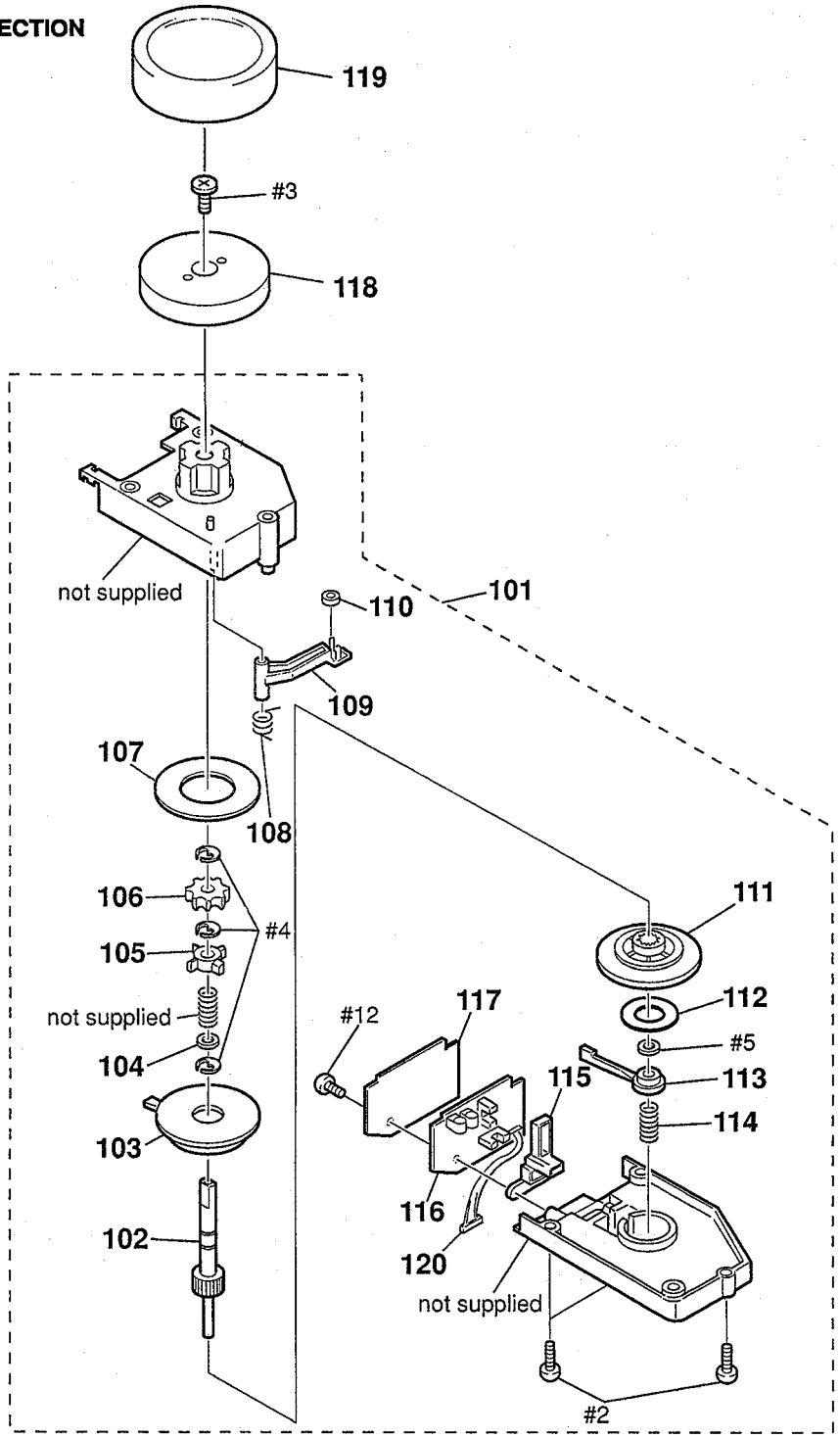
2. KEYBOARD SECTION



Ref. No.	Part No.	Description	Remarks
51	X-3944-189-2	COVER ASSY, TOP	
52	3-957-769-01	SET, KEY TOP	
53	1-751-569-11	CABLE, FLAT (FAC-1)	
54	1-649-632-11	KY-22 BOARD	
55	3-180-633-03	RUBBER, DIAL KNOB	
* 56	3-180-632-01	KNOB, DIAL	
* 57	A-6734-253-A	DIAL BLOCK ASSY, SERCH	
58	1-751-566-11	CABLE, FLAT (FKK-1)	
59	1-751-568-11	CABLE, FLAT (FKK-2)	
60	A-7092-190-A	FADER ASSY	
61	A-7063-837-A	KS-15 BOARD, COMPLETE	
62	1-751-564-11	CABLE, FLAT (FUP-1)	
* 63	A-7066-119-A	CP-64 (P) BOARD, COMPLETE	
64	3-956-994-31	SHEET, INDICATION (BKGD)	
65	3-956-994-21	SHEET, INDICATION (AUX)	
66	3-956-994-11	SHEET, INDICATION (P2)	
67	3-956-994-01	SHEET, INDICATION (P1)	
68	1-751-567-11	CABLE, FLAT (FJS-1)	
* 69	A-7066-118-A	JS-25 BOARD, COMPLETE	
70	3-956-977-01	STICK, JOY	
* 71	3-956-995-01	COVER, STICK	
72	2-118-268-01	NUT (M9), HEXAGON	
* 73	3-957-732-01	HOLDER, JS LED	
74	3-957-037-01	BUTTON (B-45) (AUDIO FOLLOW)	
75	3-957-040-01	SPRING (L), COMPRESSION	
76	3-957-038-01	BUTTON (B-46) (AUTO TRANS/PAUSE)	
77	3-957-007-01	BUTTON (G)	
78	3-957-039-01	SPRING (S), COMPRESSION	
79	3-956-978-01	GRIP (A)	

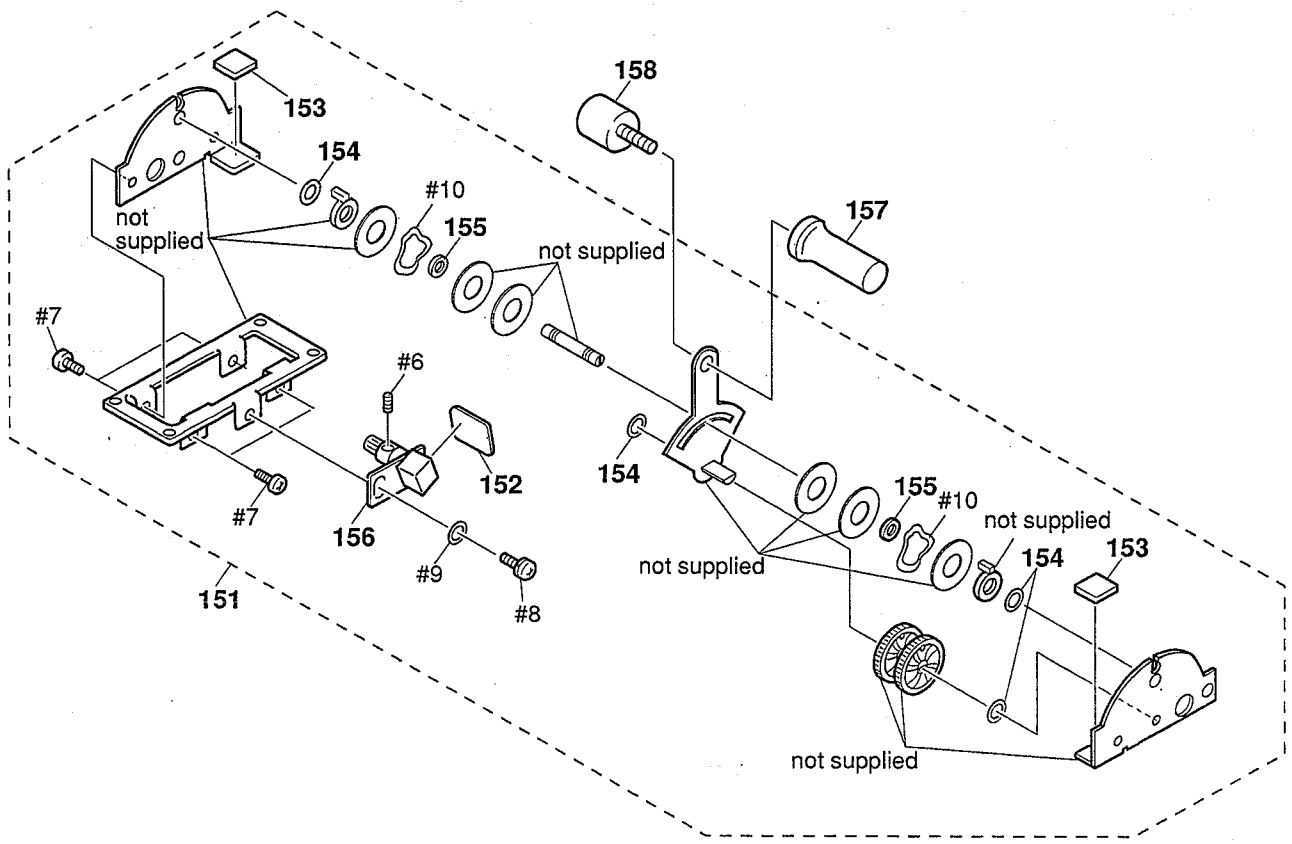
Ref. No.	Part No.	Description	Remarks
80	3-956-979-01	GRIP (B)	
81	3-957-004-01	BUTTON (F)	
84	A-7063-835-A	AM-32 BOARD, COMPLETE	
85	3-956-976-01	KNOB, ROTARY	
86	3-957-042-01	BUTTON (B-47) (P1)	
87	3-957-043-01	BUTTON (B-48) (P2)	
88	3-957-044-01	BUTTON (B-49) (AUX 1)	
89	A-7063-834-A	DP-46 BOARD, COMPLETE	
90	3-956-975-01	KNOB, SLIDE	
91	1-751-563-11	CABLE, FLAT (FDP-1)	
92	1-751-562-11	CABLE, FLAT (FAR-1)	
93	A-7063-833-A	AS-46 BOARD, COMPLETE	
* 94	3-957-048-01	COVER, SLIDE KNOB	
* 95	3-957-061-01	BASE, SLIDE KNOB	
96	1-520-503-11	METER UNIT, LED LEVEL	
97	1-562-148-11	HOUSING, 3P	
98	1-467-473-11	KEYBOARD BLOCK	
D140	8-719-913-53	LED LA-301VL (TRANSRATE B)	
D141	8-719-913-53	LED LA-301VL (TRANSRATE B)	
D142	8-719-913-53	LED LA-301VL (TRANSRATE B)	
LS107	1-692-720-11	SWITCH, PUSH (LED) (A-BUS P1)	
LS108	1-692-720-11	SWITCH, PUSH (LED) (A-BUS P2)	
LS109	1-692-720-11	SWITCH, PUSH (LED) (A-BUS AUX)	
LS110	1-692-720-11	SWITCH, PUSH (LED) (A-BUS BKGD)	
LS111	1-692-720-11	SWITCH, PUSH (LED) (B-BUS P1)	
LS112	1-692-720-11	SWITCH, PUSH (LED) (B-BUS P2)	
LS113	1-692-720-11	SWITCH, PUSH (LED) (B-BUS AUX)	
LS114	1-692-720-11	SWITCH, PUSH (LED) (B-BUS BKGD)	

3. SEARCH DIAL SECTION



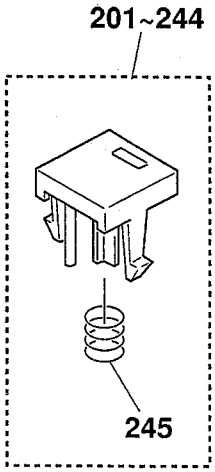
Ref. No.	Part No.	Description	Remarks
* 101	A-6734-253-A	DIAL BLOCK ASSY, SERCH	
* 102	X-2124-627-1	SHAFT SUB ASSY, MAIN	
* 103	2-143-602-03	CAM, SD	
104	3-701-443-21	WASHER, 5 DIA.	
* 105	2-143-604-01	GUIDE, LOCK OUT	
* 106	2-124-690-01	GUIDE, LOCK IN	
* 107	2-124-694-02	PLATE, CLUTCH	
108	2-143-613-01	SPRING, TORSION	
* 109	2-143-603-01	ARM, RETURN	
110	2-124-691-01	ROLLER	
111	2-143-601-01	RING, FG	
* 112	2-124-695-01	PLATE, CUSHION	
113	2-124-693-02	PLATE	
* 114	2-124-692-01	SPRING, COMPRESSION	
* 115	2-124-699-02	HOLDER, SENSOR	
* 116	1-633-548-13	PTC-39 BOARD	
* 117	2-124-696-01	PROTECTOR, PTC	
* 118	3-180-632-01	KNOB, DIAL	
119	3-180-633-03	RUBBER, DIAL KNOB	
120	1-562-151-11	HOUSING, 6P	

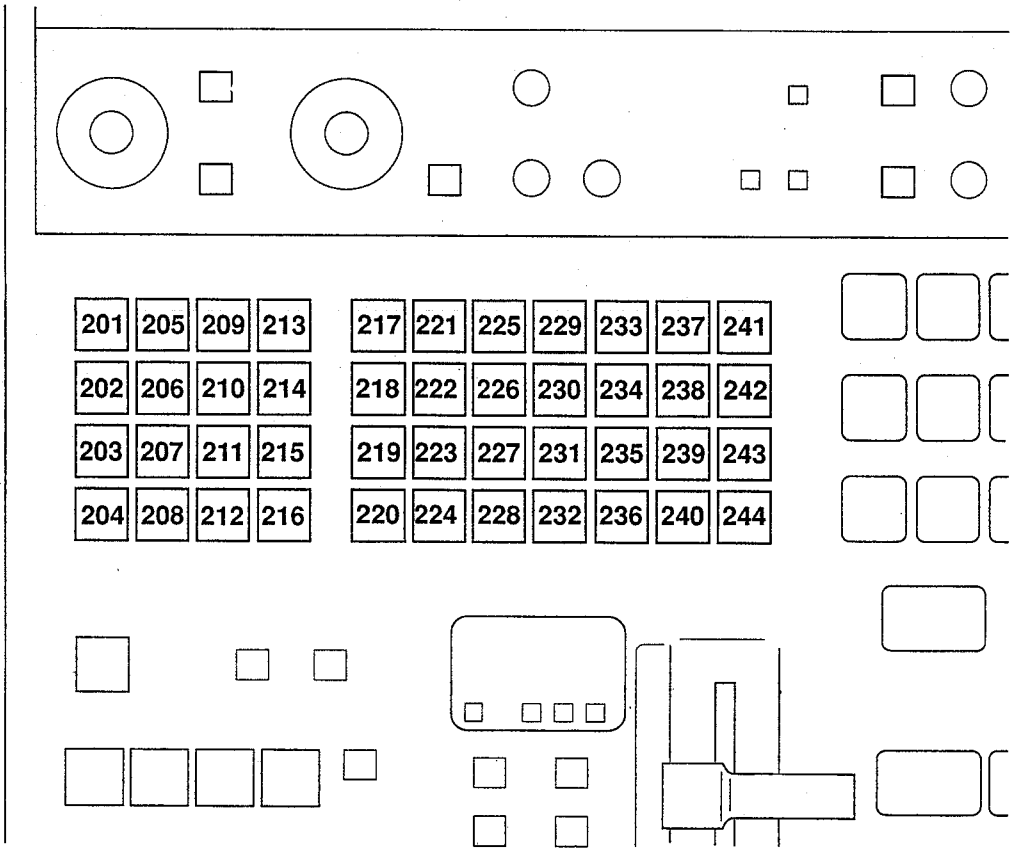
4. FADER SECTION



Ref. No.	Part No.	Description	Remarks
151	A-7092-190-A	FADER ASSY	
* 152	1-617-831-11	VR-26 BOARD	
153	9-911-838-XX	CUSHION, STAY	
154	3-701-441-21	WASHER	
* 155	2-112-899-01	SPACER, RUBBER	
156	1-237-127-11	RES, VAR, CARBON 5K	
157	3-956-979-01	GRIP (B)	
158	3-956-978-01	GRIP (A)	

5. BUTTON SECTION





Ref. No.	Part No.	Description	Remarks
201	3-957-023-01	BUTTON (B-1) (7)	
202	3-957-024-01	BUTTON (B-2) (4)	
203	3-957-025-01	BUTTON (B-3) (1)	
204	3-957-026-01	BUTTON (B-4) (0)	
205	3-957-027-01	BUTTON (B-5) (8)	
206	3-957-028-01	BUTTON (B-6) (5)	
207	3-957-029-01	BUTTON (B-7) (2)	
208	3-957-030-01	BUTTON (B-8) (FS)	
209	3-957-031-01	BUTTON (B-9) (9)	
210	3-957-032-01	BUTTON (B-10) (6)	
211	3-957-033-01	BUTTON (B-11) (3)	
212	3-957-034-01	BUTTON (B-12) (BS)	
213	3-957-035-01	BUTTON (B-13) (+)	
214	3-957-036-01	BUTTON (B-14) (-)	
215	3-957-049-01	BUTTON (B-15) (CLR)	
216	3-957-050-01	BUTTON (B-16) (BNT)	
217	3-957-051-01	BUTTON (B-17) ( )	
218	3-957-052-01	BUTTON (B-18) ( )	
219	3-957-053-01	BUTTON (B-19) (SPLIT SLIDE)	
220	3-957-054-01	BUTTON (B-20) (SLIDE IN)	
221	3-957-055-01	BUTTON (B-21) ( )	
222	3-957-056-01	BUTTON (B-22) ( )	
223	3-957-057-01	BUTTON (B-23) ( )	

Ref. No.	Part No.	Description	Remarks
224	3-957-058-01	BUTTON (B-24) (SLIDE OUT)	
225	3-957-059-01	BUTTON (B-25) ( )	
226	3-957-060-01	BUTTON (B-26) ( )	
227	3-957-063-01	BUTTON (B-27) ( )	
228	3-957-064-01	BUTTON (B-28) (SCROLL)	
229	3-957-065-01	BUTTON (B-29) ( )	
230	3-957-066-01	BUTTON (B-30) ( )	
231	3-957-067-01	BUTTON (B-31) ( )	
232	3-957-068-01	BUTTON (B-32) (USER 1)	
233	3-957-069-01	BUTTON (B-33) ( )	
234	3-957-070-01	BUTTON (B-34) ( )	
235	3-957-071-01	BUTTON (B-35) ( )	
236	3-957-072-01	BUTTON (B-36) (USER 2)	
237	3-957-073-01	BUTTON (B-37) (NORMAL MIX)	
238	3-957-082-01	BUTTON (B-38) (MOSAIK MIX)	
239	3-957-013-01	BUTTON (B-39) (POSTRZ MIX)	
240	3-957-014-01	BUTTON (B-40) (B & W MIX)	
241	3-957-015-01	BUTTON (B-41) (LUMINA CLIP TRANS)	
242	3-957-016-01	BUTTON (B-42) (LUMINA KEY)	
243	3-957-017-01	BUTTON (B-43) (CHROMA KEY)	
244	3-957-018-01	BUTTON (B-44) (P in P)	
245	3-957-040-01	SPRING (L), COMPRESSION	

SECTION 7
ELECTRICAL PARTS LIST

AM-32

NOTE:

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- −XX, −X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: μF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: μH
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA..., μPA..., uPB..., μPB..., uPC..., μPC..., uPD..., μPD...

Ref. No.	Part No.	Description			Remarks
*	A-7063-835-A	AM-32 BOARD, COMPLETE			
		**********			
					(Ref. No. 1,000 Seriese)
	2-118-268-01	NUT (M9), HEXAGON			
		< CAPACITOR >			
C001	1-162-971-11	CERAMIC CHIP	0.001uF		50V
C002	1-162-971-11	CERAMIC CHIP	0.001uF		50V
C003	1-126-204-11	ELECT CHIP	47uF	20%	16V
C004	1-162-971-11	CERAMIC CHIP	0.001uF		50V
C005	1-126-204-11	ELECT CHIP	47uF	20%	16V
C006	1-126-204-11	ELECT CHIP	47uF	20%	16V
C011	1-126-204-11	ELECT CHIP	47uF	20%	16V
C013	1-126-204-11	ELECT CHIP	47uF	20%	16V
C014	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C015	1-126-204-11	ELECT CHIP	47uF	20%	16V
C016	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C017	1-126-204-11	ELECT CHIP	47uF	20%	16V
C018	1-126-204-11	ELECT CHIP	47uF	20%	16V
C021	1-126-204-11	ELECT CHIP	47uF	20%	16V
C023	1-126-204-11	ELECT CHIP	47uF	20%	16V
C025	1-126-204-11	ELECT CHIP	47uF	20%	16V
C031	1-126-204-11	ELECT CHIP	47uF	20%	16V
C032	1-124-120-11	ELECT	220uF	20%	25V
C051	1-126-400-11	ELECT	22uF	20%	35V
C061	1-126-400-11	ELECT	22uF	20%	35V
C063	1-126-204-11	ELECT CHIP	47uF	20%	16V
C064	1-126-204-11	ELECT CHIP	47uF	20%	16V
C065	1-126-400-11	ELECT	22uF	20%	35V
C066	1-126-400-11	ELECT	22uF	20%	35V
C071	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C072	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C074	1-162-971-11	CERAMIC CHIP	0.001uF		50V
C075	1-126-400-11	ELECT	22uF	20%	35V
C076	1-126-400-11	ELECT	22uF	20%	35V
C077	1-162-971-11	CERAMIC CHIP	0.001uF		50V
C078	1-126-400-11	ELECT	22uF	20%	35V
C090	1-126-400-11	ELECT	22uF	20%	35V
C091	1-126-400-11	ELECT	22uF	20%	35V
C507	1-126-204-11	ELECT CHIP	47uF	20%	16V
C508	1-126-204-11	ELECT CHIP	47uF	20%	16V
C523	1-126-204-11	ELECT CHIP	47uF	20%	16V
C524	1-126-204-11	ELECT CHIP	47uF	20%	16V
C528	1-126-204-11	ELECT CHIP	47uF	20%	16V
C529	1-126-204-11	ELECT CHIP	47uF	20%	16V
C533	1-126-204-11	ELECT CHIP	47uF	20%	16V
C534	1-126-204-11	ELECT CHIP	47uF	20%	16V
C535	1-126-400-11	ELECT	22uF	20%	35V
C541	1-126-400-11	ELECT	22uF	20%	35V
C542	1-126-400-11	ELECT	22uF	20%	35V
C543	1-126-400-11	ELECT	22uF	20%	35V
C547	1-126-400-11	ELECT	22uF	20%	35V
C551	1-126-204-11	ELECT CHIP	47uF	20%	16V
C552	1-126-204-11	ELECT CHIP	47uF	20%	16V
C553	1-126-400-11	ELECT	22uF	20%	35V
C554	1-126-400-11	ELECT	22uF	20%	35V
C555	1-126-204-11	ELECT CHIP	47uF	20%	16V
C557	1-126-400-11	ELECT	22uF	20%	35V
C558	1-126-400-11	ELECT	22uF	20%	35V
C559	1-126-204-11	ELECT CHIP	47uF	20%	16V
C560	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C562	1-126-204-11	ELECT CHIP	47uF	20%	16V
C571	1-126-204-11	ELECT CHIP	47uF	20%	16V
C572	1-126-204-11	ELECT CHIP	47uF	20%	16V
C573	1-126-400-11	ELECT	22uF	20%	35V
C574	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C581	1-126-204-11	ELECT CHIP	47uF	20%	16V
C582	1-126-204-11	ELECT CHIP	47uF	20%	16V
C605	1-126-204-11	ELECT CHIP	47uF	20%	16V
C606	1-126-204-11	ELECT CHIP	47uF	20%	16V
C621	1-126-204-11	ELECT CHIP	47uF	20%	16V

AM-32

Ref. No.	Part No.	Description			Remarks
C622	1-126-204-11	ELECT CHIP	47uF	20%	16V
C626	1-126-204-11	ELECT CHIP	47uF	20%	16V
C627	1-126-204-11	ELECT CHIP	47uF	20%	16V
C635	1-126-400-11	ELECT	22uF	20%	35V
C641	1-126-400-11	ELECT	22uF	20%	35V
C642	1-126-400-11	ELECT	22uF	20%	35V
C643	1-126-400-11	ELECT	22uF	20%	35V
C647	1-126-400-11	ELECT	22uF	20%	35V
C653	1-126-400-11	ELECT	22uF	20%	35V
C654	1-126-400-11	ELECT	22uF	20%	35V
C656	1-126-204-11	ELECT CHIP	47uF	20%	16V
C657	1-126-400-11	ELECT	22uF	20%	35V
C658	1-126-400-11	ELECT	22uF	20%	35V
C660	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C662	1-126-204-11	ELECT CHIP	47uF	20%	16V
C673	1-126-400-11	ELECT	22uF	20%	35V
C674	1-164-361-11	CERAMIC CHIP	0.047uF		16V

< CONNECTOR >

CN001	1-568-207-11	CONNECTOR, FPC (ZIF) 23P	
CN002	1-566-543-31	CONNECTOR, FPC (NON ZIF) 11P	
CN003	1-566-542-31	CONNECTOR, FPC (NON ZIF) 10P	
CN004	1-566-532-11	CONNECTOR, FPC (ZIF) 16P	
CN005	1-506-487-11	PIN, CONNECTOR 8P	
CN006	1-506-483-21	PIN, CONNECTOR 4P	
* CN007	1-568-783-11	PIN, CONNECTOR 6P	

< DIODE >

D031	8-719-200-27	DIODE	E10DS2
D032	8-719-200-27	DIODE	E10DS2
D501	8-719-800-76	DIODE	1SS226
D502	8-719-800-76	DIODE	1SS226
D503	8-719-800-76	DIODE	1SS226
D504	8-719-800-76	DIODE	1SS226
D505	8-719-800-76	DIODE	1SS226
D601	8-719-800-76	DIODE	1SS226
D602	8-719-800-76	DIODE	1SS226
D603	8-719-800-76	DIODE	1SS226

< IC >

IC001	8-759-100-96	IC	uPC4558G2 (INV)
IC002	8-759-708-08	IC	NJM78L08A (+8V REG)
IC003	8-759-700-67	IC	NJM79L08A (-8V REG)
IC004	8-759-100-96	IC	uPC4558G2 (BUFFER)
IC005	8-759-100-96	IC	uPC4558G2 (AMP)
IC051	8-759-981-86	IC	RC4556MA (AMP)
IC061	8-759-981-86	IC	RC4556MA (AMP)
IC071	8-759-603-27	IC	M5201FP (AUX/MIC SELECT)
IC072	8-759-603-27	IC	M5201FP (AUX/MIC SELECT)
IC505	8-759-100-96	IC	uPC4558G2 (BUFFER)
IC506	8-759-100-96	IC	uPC4558G2 (BUFFER)
IC507	8-759-100-96	IC	uPC4558G2 (AMP)
IC509	8-759-100-96	IC	uPC4558G2 (AMP)
IC510	8-759-932-64	IC	BU4052BCF (INPUT SELECT)
IC511	8-759-932-64	IC	BU4052BCF (INPUT SELECT)
IC512	8-759-635-26	IC	M5283P (EVR)
IC513	8-759-635-26	IC	M5283P (EVR)
IC515	8-759-100-96	IC	uPC4558G2 (MIC AMP)
IC516	8-759-603-27	IC	M5201FP (REC/PGM SELECT)
IC518	8-759-932-64	IC	BU4052BCF (MONITOR OUTPUT SELECT)
IC519	8-759-100-96	IC	uPC4558G2 (BUFFER)
IC520	8-759-100-96	IC	uPC4558G2 (INV AMP)
IC603	8-759-100-96	IC	uPC4558G2 (BUFFER)
IC605	8-759-100-96	IC	uPC4558G2 (BUFFER)
IC606	8-759-100-96	IC	uPC4558G2 (BUFFER)
IC616	8-759-603-27	IC	M5201FP (REC/PGM SELECT)
IC620	8-759-100-96	IC	uPC4558G2 (INV AMP)

< COIL >

L001	1-410-671-31	INDUCTOR 47uH
L002	1-410-671-31	INDUCTOR 47uH
L003	1-410-671-31	INDUCTOR 47uH

< TRANSISTOR >

Q001	8-729-900-53	TRANSISTOR	DTC114EK
Q002	8-729-900-53	TRANSISTOR	DTC114EK
Q003	8-729-900-53	TRANSISTOR	DTC114EK
Q004	8-729-900-53	TRANSISTOR	DTC114EK
Q005	8-729-900-53	TRANSISTOR	DTC114EK
Q006	8-729-900-53	TRANSISTOR	DTC114EK
Q007	8-729-900-53	TRANSISTOR	DTC114EK
Q031	8-729-101-07	TRANSISTOR	2SB798-DL
Q051	8-729-202-38	TRANSISTOR	2SC3326N-A
Q052	8-729-202-38	TRANSISTOR	2SC3326N-A
Q061	8-729-202-38	TRANSISTOR	2SC3326N-A
Q062	8-729-202-38	TRANSISTOR	2SC3326N-A
Q071	8-729-901-04	TRANSISTOR	DTA114EK
Q072	8-729-901-06	TRANSISTOR	DTA144EK

< RESISTOR >

R001	1-216-833-11	METAL CHIP	10K	5%	1/16W
R002	1-216-834-11	METAL CHIP	12K	5%	1/16W
R003	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R004	1-216-833-11	METAL CHIP	10K	5%	1/16W
R005	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R011	1-216-833-11	METAL CHIP	10K	5%	1/16W
R012	1-216-834-11	METAL CHIP	12K	5%	1/16W
R013	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R021	1-216-845-11	METAL CHIP	100K	5%	1/16W
R022	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R023	1-216-845-11	METAL CHIP	100K	5%	1/16W
R024	1-216-845-11	METAL CHIP	100K	5%	1/16W
R025	1-216-845-11	METAL CHIP	100K	5%	1/16W
R026	1-216-845-11	METAL CHIP	100K	5%	1/16W
R027	1-216-841-11	METAL CHIP	47K	5%	1/16W
R031	1-216-841-11	METAL CHIP	47K	5%	1/16W
R032	1-216-833-11	METAL CHIP	10K	5%	1/16W
R033	1-216-833-11	METAL CHIP	10K	5%	1/16W
R052	1-216-849-11	METAL CHIP	220K	5%	1/16W
R053	1-216-833-11	METAL CHIP	10K	5%	1/16W
R054	1-216-043-00	METAL CHIP	560	5%	1/10W
R055	1-216-833-11	METAL CHIP	10K	5%	1/16W
R056	1-216-043-00	METAL CHIP	560	5%	1/10W
R057	1-216-833-11	METAL CHIP	10K	5%	1/16W
R058	1-216-845-11	METAL CHIP	100K	5%	1/16W
R061	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R062	1-216-849-11	METAL CHIP	220K	5%	1/16W
R063	1-216-833-11	METAL CHIP	10K	5%	1/16W
R064	1-216-043-00	METAL CHIP	560	5%	1/10W
R065	1-216-833-11	METAL CHIP	10K	5%	1/16W
R066	1-216-043-00	METAL CHIP	560	5%	1/10W
R067	1-216-833-11	METAL CHIP	10K	5%	1/16W
R068	1-216-845-11	METAL CHIP	100K	5%	1/16W
R070	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R071	1-216-841-11	METAL CHIP	47K	5%	1/16W
R072	1-216-841-11	METAL CHIP	47K	5%	1/16W
R073	1-216-841-11	METAL CHIP	47K	5%	1/16W
R074	1-216-841-11	METAL CHIP	47K	5%	1/16W
R075	1-216-849-11	METAL CHIP	220K	5%	1/16W
R076	1-216-845-11	METAL CHIP	100K	5%	1/16W
R077	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R078	1-216-836-11	METAL CHIP	18K	5%	1/16W
R079	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R080	1-216-864-11	METAL CHIP	0	5%	1/16W
R081	1-216-849-11	METAL CHIP	220K	5%	1/16W
R082	1-216-833-11	METAL CHIP	10K	5%	1/16W
R083	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R084	1-216-836-11	METAL CHIP	18K	5%	1/16W
R085	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R086	1-216-841-11	METAL CHIP	47K	5%	1/16W
R087	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R090	1-216-833-11	METAL CHIP	10K	5%	1/16W
R093	1-216-045-00	METAL CHIP	680	5%	1/10W
R094	1-216-045-00	METAL CHIP	680	5%	1/10W
R095	1-216-045-00	METAL CHIP	680	5%	1/10W
R096	1-216-045-00	METAL CHIP	680	5%	1/10W
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R506	1-216-821-11	METAL CHIP	1K	5%	1/16W
R507	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R512	1-216-821-11	METAL CHIP	1K	5%	1/16W
R513	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R516	1-216-821-11	METAL CHIP	1K	5%	1/16W
R517	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R525	1-216-849-11	METAL CHIP	220K	5%	1/16W
R526	1-216-821-11	METAL CHIP	1K	5%	1/16W
R527	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R528	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R529	1-216-833-11	METAL CHIP	10K	5%	1/16W
R531	1-216-814-11	METAL CHIP	270	5%	1/16W
R532	1-216-814-11	METAL CHIP	270	5%	1/16W
R533	1-216-814-11	METAL CHIP	270	5%	1/16W
R534	1-216-814-11	METAL CHIP	270	5%	1/16W
R535	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R536	1-216-833-11	METAL CHIP	10K	5%	1/16W
R550	1-216-849-11	METAL CHIP	220K	5%	1/16W
R551	1-216-833-11	METAL CHIP	10K	5%	1/16W
R552	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R553	1-216-839-11	METAL CHIP	33K	5%	1/16W
R554	1-216-833-11	METAL CHIP	10K	5%	1/16W
R555	1-216-833-11	METAL CHIP	10K	5%	1/16W
R556	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R557	1-216-839-11	METAL CHIP	33K	5%	1/16W
R558	1-216-833-11	METAL CHIP	10K	5%	1/16W
R559	1-216-849-11	METAL CHIP	220K	5%	1/16W
R561	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R562	1-216-833-11	METAL CHIP	10K	5%	1/16W
R564	1-216-833-11	METAL CHIP	10K	5%	1/16W
R566	1-216-833-11	METAL CHIP	10K	5%	1/16W
R567	1-216-849-11	METAL CHIP	220K	5%	1/16W
R569	1-216-864-11	METAL CHIP	0	5%	1/16W
R570	1-216-864-11	METAL CHIP	0	5%	1/16W
R571	1-216-849-11	METAL CHIP	220K	5%	1/16W
R572	1-216-849-11	METAL CHIP	220K	5%	1/16W
R573	1-216-849-11	METAL CHIP	220K	5%	1/16W
R574	1-216-849-11	METAL CHIP	220K	5%	1/16W
R575	1-216-833-11	METAL CHIP	10K	5%	1/16W
R576	1-216-833-11	METAL CHIP	10K	5%	1/16W
R577	1-216-833-11	METAL CHIP	10K	5%	1/16W
R581	1-216-849-11	METAL CHIP	220K	5%	1/16W
R583	1-216-833-11	METAL CHIP	10K	5%	1/16W
R584	1-216-849-11	METAL CHIP	220K	5%	1/16W
R585	1-216-833-11	METAL CHIP	10K	5%	1/16W
R586	1-216-833-11	METAL CHIP	10K	5%	1/16W
R593	1-216-864-11	METAL CHIP	0	5%	1/16W
R594	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R595	1-216-833-11	METAL CHIP	10K	5%	1/16W
R602	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R603	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R606	1-216-821-11	METAL CHIP	1K	5%	1/16W
R607	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R612	1-216-821-11	METAL CHIP	1K	5%	1/16W
R613	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R616	1-216-821-11	METAL CHIP	1K	5%	1/16W
R617	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R622	1-216-821-11	METAL CHIP	1K	5%	1/16W
R623	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R625	1-216-849-11	METAL CHIP	220K	5%	1/16W
R626	1-216-821-11	METAL CHIP	1K	5%	1/16W
R627	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R628	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R629	1-216-833-11	METAL CHIP	10K	5%	1/16W
R631	1-216-814-11	METAL CHIP	270	5%	1/16W
R632	1-216-814-11	METAL CHIP	270	5%	1/16W
R633	1-216-814-11	METAL CHIP	270	5%	1/16W
R634	1-216-814-11	METAL CHIP	270	5%	1/16W
R635	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R636	1-216-833-11	METAL CHIP	10K	5%	1/16W
R650	1-216-849-11	METAL CHIP	220K	5%	1/16W
R651	1-216-833-11	METAL CHIP	10K	5%	1/16W
R652	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R653	1-216-839-11	METAL CHIP	33K	5%	1/16W
R654	1-216-833-11	METAL CHIP	10K	5%	1/16W
R655	1-216-833-11	METAL CHIP	10K	5%	1/16W
R656	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R657	1-216-839-11	METAL CHIP	33K	5%	1/16W
R658	1-216-833-11	METAL CHIP	10K	5%	1/16W
R659	1-216-849-11	METAL CHIP	220K	5%	1/16W
R661	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R662	1-216-833-11	METAL CHIP	10K	5%	1/16W
R664	1-216-833-11	METAL CHIP	10K	5%	1/16W
R666	1-216-833-11	METAL CHIP	10K	5%	1/16W
R667	1-216-849-11	METAL CHIP	220K	5%	1/16W
R669	1-216-864-11	METAL CHIP	0	5%	1/16W
R670	1-216-864-11	METAL CHIP	0	5%	1/16W
R671	1-216-849-11	METAL CHIP	220K	5%	1/16W
R672	1-216-849-11	METAL CHIP	220K	5%	1/16W
R673	1-216-849-11	METAL CHIP	220K	5%	1/16W
R674	1-216-849-11	METAL CHIP	220K	5%	1/16W
R675	1-216-833-11	METAL CHIP	10K	5%	1/16W
R676	1-216-833-11	METAL CHIP	10K	5%	1/16W
R677	1-216-833-11	METAL CHIP	10K	5%	1/16W
R681	1-216-849-11	METAL CHIP	220K	5%	1/16W
R683	1-216-833-11	METAL CHIP	10K	5%	1/16W
R684	1-216-849-11	METAL CHIP	220K	5%	1/16W
R685	1-216-833-11	METAL CHIP	10K	5%	1/16W
R686	1-216-833-11	METAL CHIP	10K	5%	1/16W
R693	1-216-864-11	METAL CHIP	0	5%	1/16W
R694	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R695	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
		< VARIABLE RESISTOR >			
RV001	1-223-530-11	RES, VAR, CARBON 20K/20K(MAIN P1)			
RV002	1-223-530-11	RES, VAR, CARBON 20K/20K(SUB P1)			
RV003	1-223-530-11	RES, VAR, CARBON 20K/20K(MAIN P2)			
RV004	1-223-530-11	RES, VAR, CARBON 20K/20K(SUB P2)			
RV005	1-223-530-11	RES, VAR, CARBON 20K/20K(AUX 1)			
RV006	1-223-530-11	RES, VAR, CARBON 20K/20K(MONI OUT)			
		< SWITCH >			
S001	1-570-865-11	SWITCH, SLIDE(AUDIO INPUT LEVEL)			
**********					
	A-7063-833-A	AS-46 BOARD, COMPLETE			
		**********			
					(Ref. No. 1,000 Seriese)
	1-751-562-11	CABLE, FLAT (FAR-1)			
*	3-957-048-01	COVER, SLIDE KNOB			
*	3-957-061-01	BASE, SLIDE KNOB			
		< CONNECTOR >			
CN901	1-566-527-11	CONNECTOR, FPC (ZIF) 11P			
		< VARIABLE RESISTOR >			
RV901	1-241-313-11	RES, VAR, SLIDE 10K/10K (AUX 2/MIC)			
RV902	1-241-313-11	RES, VAR, SLIDE 10K/10K (MASTER)			
**********					
*	A-7066-119-A	CP-64 (P) BOARD, COMPLETE			
		**********			
					(Ref. No. 2,000 Seriese)
*	1-526-662-21	SOCKET, IC (DP) 40P			
		< CAPACITOR >			
C500	1-126-193-11	ELECT	1uF	20%	50V
C501	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C502	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C503	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C504	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C505	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C506	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C507	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C508	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C509	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C510	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C511	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C512	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C515	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C516	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description		Remarks
C517	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C518	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C519	1-126-205-11	ELECT CHIP 47uF	20%	6.3V
C520	1-126-205-11	ELECT CHIP 47uF	20%	6.3V
C521	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C522	1-125-445-11	CAP, DOUBLE LAYERS 0.22F		
C523	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C524	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C525	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C526	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C527	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C528	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C529	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C530	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C531	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C532	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C533	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C534	1-162-917-11	CERAMIC CHIP 15PF	5%	50V
C535	1-162-917-11	CERAMIC CHIP 15PF	5%	50V
C536	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C537	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C538	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C600	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C601	1-164-360-11	CERAMIC CHIP 0.1uF		16V
C602	1-164-360-11	CERAMIC CHIP 0.1uF		16V
		< CONNECTOR >		
CN500	1-569-030-11	CONNECTOR, FPC (ZIF) 21P		
CN501	1-506-485-11	PIN, CONNECTOR 6P		
* CN502	1-569-035-11	CONNECTOR, FPC (ZIF) 30P		
CN503	1-580-722-11	CONNECTOR, BOARD TO BOARD 28P		
CN504	1-580-722-11	CONNECTOR, BOARD TO BOARD 28P		
* CN600	1-569-035-11	CONNECTOR, FPC (ZIF) 30P		
		< DIODE >		
D500	8-719-800-76	DIODE 1SS226		
D501	8-719-105-52	DIODE RD3.6M-B2		
D502	8-719-980-78	DIODE ERA83-006		
D503	8-719-104-34	DIODE 1S2836		
		< FERRITE BEAD >		
FB500	1-412-390-21	INDUCTOR CHIP 0uH		
FB501	1-412-390-21	INDUCTOR CHIP 0uH		
FB502	1-412-390-21	INDUCTOR CHIP 0uH		
FB503	1-412-390-21	INDUCTOR CHIP 0uH		
FB504	1-412-390-21	INDUCTOR CHIP 0uH		
FB505	1-412-390-21	INDUCTOR CHIP 0uH		
FB506	1-412-390-21	INDUCTOR CHIP 0uH		
FB507	1-412-390-21	INDUCTOR CHIP 0uH		
FB508	1-412-390-21	INDUCTOR CHIP 0uH		
FB509	1-412-390-21	INDUCTOR CHIP 0uH		

Ref. No.	Part No.	Description	Remarks
FB510	1-412-390-21	INDUCTOR CHIP 0uH	
FB511	1-412-390-21	INDUCTOR CHIP 0uH	
FB512	1-412-390-21	INDUCTOR CHIP 0uH	
FB513	1-412-390-21	INDUCTOR CHIP 0uH	
FB514	1-412-390-21	INDUCTOR CHIP 0uH	
FB515	1-412-390-21	INDUCTOR CHIP 0uH	
FB516	1-412-390-21	INDUCTOR CHIP 0uH	
FB517	1-412-390-21	INDUCTOR CHIP 0uH	
FB518	1-412-390-21	INDUCTOR CHIP 0uH	
FB519	1-412-390-21	INDUCTOR CHIP 0uH	
FB520	1-412-390-21	INDUCTOR CHIP 0uH	
FB521	1-412-390-21	INDUCTOR CHIP 0uH	
FB522	1-412-390-21	INDUCTOR CHIP 0uH	
FB523	1-412-390-21	INDUCTOR CHIP 0uH	
FB524	1-412-390-21	INDUCTOR CHIP 0uH	
FB525	1-412-390-21	INDUCTOR CHIP 0uH	
FB526	1-412-390-21	INDUCTOR CHIP 0uH	
FB527	1-412-390-21	INDUCTOR CHIP 0uH	
FB528	1-412-390-21	INDUCTOR CHIP 0uH	
FB529	1-412-390-21	INDUCTOR CHIP 0uH	
FB530	1-412-390-21	INDUCTOR CHIP 0uH	
FB531	1-412-390-21	INDUCTOR CHIP 0uH	
FB532	1-412-390-21	INDUCTOR CHIP 0uH	
FB533	1-412-390-21	INDUCTOR CHIP 0uH	
FB534	1-412-390-21	INDUCTOR CHIP 0uH	
FB535	1-412-390-21	INDUCTOR CHIP 0uH	
FB536	1-412-390-21	INDUCTOR CHIP 0uH	
FB537	1-412-390-21	INDUCTOR CHIP 0uH	
FB538	1-412-390-21	INDUCTOR CHIP 0uH	
FB539	1-412-390-21	INDUCTOR CHIP 0uH	
FB540	1-412-390-21	INDUCTOR CHIP 0uH	
FB541	1-412-390-21	INDUCTOR CHIP 0uH	
FB543	1-412-390-21	INDUCTOR CHIP 0uH	
FB544	1-412-390-21	INDUCTOR CHIP 0uH	
FB545	1-412-390-21	INDUCTOR CHIP 0uH	
FB546	1-412-390-21	INDUCTOR CHIP 0uH	
FB547	1-412-390-21	INDUCTOR CHIP 0uH	
FB548	1-412-390-21	INDUCTOR CHIP 0uH	
FB549	1-412-390-21	INDUCTOR CHIP 0uH	
FB550	1-412-390-21	INDUCTOR CHIP 0uH	
FB551	1-412-390-21	INDUCTOR CHIP 0uH	
FB552	1-412-390-21	INDUCTOR CHIP 0uH	
FB553	1-412-390-21	INDUCTOR CHIP 0uH	
FB554	1-412-390-21	INDUCTOR CHIP 0uH	
FB555	1-412-390-21	INDUCTOR CHIP 0uH	
FB556	1-412-390-21	INDUCTOR CHIP 0uH	
FB557	1-412-390-21	INDUCTOR CHIP 0uH	
FB558	1-412-390-21	INDUCTOR CHIP 0uH	
FB559	1-412-390-21	INDUCTOR CHIP 0uH	
FB560	1-412-390-21	INDUCTOR CHIP 0uH	

CP-64

Ref. No.	Part No.	Description	Remarks
FB561	1-412-390-21	INDUCTOR CHIP 0uH	
FB562	1-412-390-21	INDUCTOR CHIP 0uH	
FB563	1-412-390-21	INDUCTOR CHIP 0uH	
FB564	1-412-390-21	INDUCTOR CHIP 0uH	
FB565	1-412-390-21	INDUCTOR CHIP 0uH	
FB566	1-412-390-21	INDUCTOR CHIP 0uH	
FB567	1-412-390-21	INDUCTOR CHIP 0uH	
FB568	1-412-390-21	INDUCTOR CHIP 0uH	
		< IC >	
IC500	8-759-048-29	IC M37732S4AFP (MASTER MICOM)	
IC501	8-752-855-96	IC CXP80116-895Q (OSD MICOM)	
IC502	8-759-937-56	IC S-8054ALB-LM-S (RESET)	
IC503	8-759-925-80	IC SN74HC14ANS (SCHMITT INV)	
IC504	8-759-185-95	IC TC74VHC245F(EL)(BUS TRASCEIVER)	
IC505	8-759-011-65	IC MC74HC4053F (DATA SELECT)	
IC506	8-759-159-70	IC BR9021BF (EEPROM)	
IC507	8-759-185-95	IC TC74VHC245F(EL)(BAS TRANSCEIVER)	
IC508	8-759-186-32	IC TC74VHC21F (AND GATE)	
IC509	8-759-176-24	IC M66800FP (MEMORY EXPANDER)	
IC510	8-759-277-73	IC M5M27C102P-15-GDX991(ROM)	
IC511	8-759-185-79	IC TC74VHC138F(EL)(CHIP SELECT)	
IC512	8-752-356-60	IC CXK5864CM-10LL (RAM)	
IC513	8-752-356-60	IC CXK5864CM-10LL (RAM)	
IC514	8-759-081-44	IC TC74VHC04F (INV)	
IC515	8-759-244-12	IC TC74AC175F (DELAY)	
IC516	8-759-185-70	IC TC74VHC32F(EL) (OR/GATE)	
IC517	8-759-185-79	IC TC74VHC138F(EL) (ADDRESS DECODER)	
IC518	8-752-327-37	IC CXD1500Q (CPG/PTC/PIU/ICU)	
IC519	8-759-185-95	IC TC74VHC245F(EL) (BUS TANSCEIVER)	
IC520	8-759-185-95	IC TC74VHC245F(EL) (BUS TANSCEIVER)	
IC521	8-759-081-48	IC TC74VHC08F (GATE)	
IC522	8-759-081-48	IC TC74VHC08F (GATE)	
IC523	8-759-081-48	IC TC74VHC08F (GATE)	
IC524	8-759-081-48	IC TC74VHC08F (GATE)	
IC600	8-759-190-79	IC uPD72001GC-11-3B6 (UART)	
IC601	8-759-185-70	IC TC74VHC32F(EL)(UART SELECT)	
IC602	8-759-190-79	IC uPD72001GC-11-3B6 (UART)	
		< COIL >	
L501	1-412-029-11	INDUCTOR CHIP 10uH	
		< TRANSISTOR >	
Q500	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q501	8-729-216-22	TRANSISTOR 2SA1162-G	
Q502	8-729-901-01	TRANSISTOR DTC144EK	

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R500	1-216-854-11	METAL CHIP	560K	5%	1/16W
R501	1-216-864-11	METAL CHIP	0	5%	1/16W
R502	1-216-857-11	METAL CHIP	1M	5%	1/16W
R503	1-216-837-11	METAL CHIP	22K	5%	1/16W
R504	1-216-837-11	METAL CHIP	22K	5%	1/16W
R505	1-216-841-11	METAL CHIP	47K	5%	1/16W
R506	1-216-841-11	METAL CHIP	47K	5%	1/16W
R507	1-216-837-11	METAL CHIP	22K	5%	1/16W
R513	1-216-841-11	METAL CHIP	47K	5%	1/16W
R515	1-216-841-11	METAL CHIP	47K	5%	1/16W
R517	1-216-841-11	METAL CHIP	47K	5%	1/16W
R519	1-216-841-11	METAL CHIP	47K	5%	1/16W
R543	1-216-841-11	METAL CHIP	47K	5%	1/16W
R547	1-216-864-11	METAL CHIP	0	5%	1/16W
R548	1-216-821-11	METAL CHIP	1K	5%	1/16W
R549	1-216-801-11	METAL CHIP	22	5%	1/16W
R551	1-216-864-11	METAL CHIP	0	5%	1/16W
R552	1-216-864-11	METAL CHIP	0	5%	1/16W
R553	1-216-864-11	METAL CHIP	0	5%	1/16W
R554	1-216-837-11	METAL CHIP	22K	5%	1/16W
R555	1-216-816-11	METAL CHIP	390	5%	1/16W
R556	1-216-841-11	METAL CHIP	47K	5%	1/16W
R557	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R558	1-216-837-11	METAL CHIP	22K	5%	1/16W
R559	1-216-806-11	METAL GLAZE	56	5%	1/16W
R562	1-216-833-11	METAL CHIP	10K	5%	1/16W
R563	1-216-837-11	METAL CHIP	22K	5%	1/16W
R569	1-216-841-11	METAL CHIP	47K	5%	1/16W
R570	1-216-841-11	METAL CHIP	47K	5%	1/16W
R584	1-216-837-11	METAL CHIP	22K	5%	1/16W
R585	1-216-841-11	METAL CHIP	47K	5%	1/16W
R586	1-216-841-11	METAL CHIP	47K	5%	1/16W
R587	1-216-841-11	METAL CHIP	47K	5%	1/16W
R588	1-216-841-11	METAL CHIP	47K	5%	1/16W
R589	1-216-841-11	METAL CHIP	47K	5%	1/16W
R590	1-216-841-11	METAL CHIP	47K	5%	1/16W
R591	1-216-837-11	METAL CHIP	22K	5%	1/16W
R592	1-216-841-11	METAL CHIP	47K	5%	1/16W
R593	1-216-841-11	METAL CHIP	47K	5%	1/16W
R594	1-216-841-11	METAL CHIP	47K	5%	1/16W
R595	1-216-841-11	METAL CHIP	47K	5%	1/16W
R596	1-216-837-11	METAL CHIP	22K	5%	1/16W
R597	1-216-837-11	METAL CHIP	22K	5%	1/16W
R598	1-216-837-11	METAL CHIP	22K	5%	1/16W
R600	1-216-837-11	METAL CHIP	22K	5%	1/16W
R601	1-216-837-11	METAL CHIP	22K	5%	1/16W
R602	1-216-837-11	METAL CHIP	22K	5%	1/16W
R603	1-216-837-11	METAL CHIP	22K	5%	1/16W
R604	1-216-841-11	METAL CHIP	47K	5%	1/16W
R625	1-216-841-11	METAL CHIP	47K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R626	1-216-841-11	METAL CHIP	47K	5%	1/16W
R627	1-216-841-11	METAL CHIP	47K	5%	1/16W
R628	1-216-841-11	METAL CHIP	47K	5%	1/16W
R629	1-216-841-11	METAL CHIP	47K	5%	1/16W
R630	1-216-864-11	METAL CHIP	0	5%	1/16W
R631	1-216-809-11	METAL CHIP	100	5%	1/16W
R632	1-216-809-11	METAL CHIP	100	5%	1/16W
R633	1-216-809-11	METAL CHIP	100	5%	1/16W
R638	1-216-864-11	METAL CHIP	0	5%	1/16W
R640	1-216-864-11	METAL CHIP	0	5%	1/16W
R641	1-216-864-11	METAL CHIP	0	5%	1/16W
R643	1-216-837-11	METAL CHIP	22K	5%	1/16W
R646	1-216-837-11	METAL CHIP	22K	5%	1/16W
R647	1-216-837-11	METAL CHIP	22K	5%	1/16W
R648	1-216-837-11	METAL CHIP	22K	5%	1/16W
R649	1-216-837-11	METAL CHIP	22K	5%	1/16W
R650	1-216-837-11	METAL CHIP	22K	5%	1/16W
R651	1-216-837-11	METAL CHIP	22K	5%	1/16W
R652	1-216-837-11	METAL CHIP	22K	5%	1/16W
R653	1-216-837-11	METAL CHIP	22K	5%	1/16W
R655	1-216-837-11	METAL CHIP	22K	5%	1/16W
R656	1-216-841-11	METAL CHIP	47K	5%	1/16W
R657	1-216-837-11	METAL CHIP	22K	5%	1/16W

< VIBRATOR >

X500	1-579-070-41	VIBRATOR, CRYSTAL 16MHz	
X501	1-579-070-41	VIBRATOR, CRYSTAL 16MHz	
X502	1-577-720-11	VIBRATOR, CRYSTAL 14.7456MHz	

****

*	A-7063-834-A	DP-46 BOARD, COMPLETE	
		**********	
			(Ref. No. 2,000 Seriese)
	1-751-563-11	CABLE, FLAT (FDP-1)	

< CAPACITOR >

C901	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C902	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C904	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C905	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C906	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C907	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C908	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C909	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C910	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C911	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C912	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C913	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C914	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C915	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C916	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C917	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C918	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C919	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C920	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C921	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C922	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C923	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C924	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C925	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C926	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C927	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C928	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C929	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C930	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C931	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C932	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C933	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C934	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C935	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C936	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C937	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C940	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C951	1-126-206-11	ELECT CHIP	100uF 20%	6.3V
C952	1-126-206-11	ELECT CHIP	100uF 20%	6.3V
C953	1-124-779-00	ELECT CHIP	10uF 20%	16V
C954	1-124-779-00	ELECT CHIP	10uF 20%	16V
C955	1-124-779-00	ELECT CHIP	10uF 20%	16V
C956	1-124-779-00	ELECT CHIP	10uF 20%	16V
C957	1-124-779-00	ELECT CHIP	10uF 20%	16V
C959	1-124-779-00	ELECT CHIP	10uF 20%	16V
C960	1-124-779-00	ELECT CHIP	10uF 20%	16V
C961	1-124-779-00	ELECT CHIP	10uF 20%	16V
C970	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C971	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C972	1-163-038-00	CERAMIC CHIP	0.1uF	25V

< CONNECTOR >

* CN901	1-569-035-11	CONNECTOR, FPC (ZIF) 30P	
CN902	1-506-485-11	PIN, CONNECTOR 6P	

< DIODE >

D901	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D902	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D903	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D904	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D905	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D906	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D907	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D908	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D909	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)
D910	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)

DP-46

Ref. No.	Part No.	Description	Remarks
D911	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D912	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D913	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D914	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D915	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D916	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D917	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D918	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D919	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D920	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D921	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D922	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D923	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D924	8-719-913-53	LED LA-301VL (PLAYER 1 HOURS 8)	
D925	8-719-913-53	LED LA-301VL (EDIT PGM 8)	
D926	8-719-913-53	LED LA-301VL (EDIT PGM 8)	
D927	8-719-913-53	LED LA-301VL (EDIT PGM 8)	
D931	8-719-104-34	DIODE 1S2836	
D932	8-719-104-34	DIODE 1S2836	
D933	8-719-104-34	DIODE 1S2836	
D934	8-719-104-34	DIODE 1S2836	
D935	8-719-104-34	DIODE 1S2836	
D936	8-719-104-34	DIODE 1S2836	
D937	8-719-104-34	DIODE 1S2836	
D938	8-719-104-34	DIODE 1S2836	
D941	8-719-801-78	DIODE 1SS184	
D942	8-719-801-78	DIODE 1SS184	
D943	8-719-801-78	DIODE 1SS184	
D944	8-719-801-78	DIODE 1SS184	
D945	8-719-801-78	DIODE 1SS184	
D946	8-719-801-78	DIODE 1SS184	
D947	8-719-801-78	DIODE 1SS184	
D948	8-719-801-78	DIODE 1SS184	
D949	8-719-801-78	DIODE 1SS184	
D950	8-719-801-78	DIODE 1SS184	
D951	8-719-801-78	DIODE 1SS184	
D952	8-719-801-78	DIODE 1SS184	
D961	8-719-029-43	DIODE CL-140SD-CD-T (RECORDER SERVO)	
D962	8-719-029-43	DIODE CL-140SD-CD-T (SCREEN OFF)	
D963	8-719-029-43	DIODE CL-140SD-CD-T (RECORDER SERVO)	
D964	8-719-029-43	DIODE CL-140SD-CD-T (SCREEN ON)	
D965	8-719-029-43	DIODE CL-140SD-CD-T (SCREEN MENU)	
D966	8-719-029-43	DIODE CL-140SD-CD-T (SCREEN MENU)	
D967	8-719-029-43	DIODE CL-140SD-CD-T (RECORDER IN)	
D968	8-719-029-43	DIODE CL-140SD-CD-T (RECORDER OUT)	
D969	8-719-029-43	DIODE CL-140SD-CD-T (PLAYER 1 SERVO)	
D970	8-719-029-43	DIODE CL-140SD-CD-T (PLAYER 2 SERVO)	
D971	8-719-029-43	DIODE CL-140SD-CD-T (PLAYER 1 SERVO)	
D972	8-719-029-43	DIODE CL-140SD-CD-T (PLAYER 2 SERVO)	
D973	8-719-029-43	DIODE CL-140SD-CD-T (A-BUS P1)	
D974	8-719-029-43	DIODE CL-140SD-CD-T (B-BUS P1)	
D975	8-719-029-43	DIODE CL-140SD-CD-T (A-BUS P2)	
D976	8-719-029-43	DIODE CL-140SD-CD-T (B-BUS P2)	
D977	8-719-029-43	DIODE CL-140SD-CD-T (A-BUS AUX 1)	
D978	8-719-029-43	DIODE CL-140SD-CD-T (B-BUS AUX 1)	
D979	8-719-029-43	DIODE CL-140SD-CD-T (PLAYER 1 IN)	
D980	8-719-029-43	DIODE CL-140SD-CD-T (PLAYER 2 IN)	
D981	8-719-029-43	DIODE CL-140SD-CD-T (PLAYER 1 OUT)	
D982	8-719-029-43	DIODE CL-140SD-CD-T (PLAYER 2 OUT)	
		< FERRITE BEAD >	
FB901	1-543-813-21	FILTER, EMI	
FB902	1-543-813-21	FILTER, EMI	
FB903	1-543-813-21	FILTER, EMI	
		< IC >	
IC901	8-759-234-67	IC TMP82C79M-2 (KEY/LED CONTROLLER)	
IC902	8-759-234-67	IC TMP82C79M-2 (KEY/LED CONTROLLER)	
IC903	8-759-926-11	IC SN74HC138ANS (ADDRESS DECODER)	
IC904	8-759-926-42	IC SN74HC238ANS (ADDRESS DECODER)	
IC905	8-759-926-42	IC SN74HC238ANS (ADDRESS DECODER)	
IC906	8-759-926-77	IC SN74HC541ANS (BUFFER)	
IC911	8-759-051-53	IC TD62381F (DRIVER)	
IC912	8-759-051-53	IC TD62381F (DRIVER)	
IC913	8-759-051-53	IC TD62381F (DRIVER)	
IC914	8-759-051-53	IC TD62381F (DRIVER)	
IC915	8-759-051-53	IC TD62381F (DRIVER)	
IC916	8-759-926-42	IC SN74HC238ANS (ADDRESS DECODER)	
IC917	8-759-926-42	IC SN74HC238ANS (ADDRESS DECODER)	
		< COIL >	
L901	1-410-381-11	INDUCTOR CHIP 10uH	
		< SWIICT >	
LS901	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T)	(EDIT NO)
LS902	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T)	(SNAP SHOT)
LS903	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T)	(STORE)
LS904	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T)	(RECALL)
LS905	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T)	(PGM MODE)
LS906	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T)	(LEARN)
		< TRANSISTOR >	
Q901	8-729-904-48	TRANSISTOR DTB113EK	
Q902	8-729-904-48	TRANSISTOR DTB113EK	
Q903	8-729-904-48	TRANSISTOR DTB113EK	
Q904	8-729-904-48	TRANSISTOR DTB113EK	
Q905	8-729-904-48	TRANSISTOR DTB113EK	
Q906	8-729-904-48	TRANSISTOR DTB113EK	
Q907	8-729-904-48	TRANSISTOR DTB113EK	
Q908	8-729-904-48	TRANSISTOR DTB113EK	
Q909	8-729-904-48	TRANSISTOR DTB113EK	
Q910	8-729-904-48	TRANSISTOR DTB113EK	

Ref. No.	Part No.	Description			Remarks
Q911	8-729-904-48	TRANSISTOR	DTB113EK		
Q912	8-729-904-48	TRANSISTOR	DTB113EK		
Q913	8-729-904-48	TRANSISTOR	DTB113EK		
Q914	8-729-904-48	TRANSISTOR	DTB113EK		
Q915	8-729-904-48	TRANSISTOR	DTB113EK		
Q916	8-729-904-48	TRANSISTOR	DTB113EK		
Q917	8-729-904-48	TRANSISTOR	DTB113EK		
Q918	8-729-904-48	TRANSISTOR	DTB113EK		
Q919	8-729-904-48	TRANSISTOR	DTB113EK		
Q920	8-729-904-48	TRANSISTOR	DTB113EK		
Q921	8-729-904-48	TRANSISTOR	DTB113EK		
Q922	8-729-904-48	TRANSISTOR	DTB113EK		
Q923	8-729-904-48	TRANSISTOR	DTB113EK		
Q930	8-729-901-06	TRANSISTOR	DTA144EK		
		< RESISTOR >			
R901	1-216-031-00	METAL CHIP	180	5%	1/10W
R902	1-216-031-00	METAL CHIP	180	5%	1/10W
R903	1-216-031-00	METAL CHIP	180	5%	1/10W
R904	1-216-031-00	METAL CHIP	180	5%	1/10W
R905	1-216-031-00	METAL CHIP	180	5%	1/10W
R906	1-216-031-00	METAL CHIP	180	5%	1/10W
R907	1-216-031-00	METAL CHIP	180	5%	1/10W
R908	1-216-031-00	METAL CHIP	180	5%	1/10W
R909	1-216-031-00	METAL CHIP	180	5%	1/10W
R910	1-216-031-00	METAL CHIP	180	5%	1/10W
R911	1-216-031-00	METAL CHIP	180	5%	1/10W
R912	1-216-031-00	METAL CHIP	180	5%	1/10W
R913	1-216-031-00	METAL CHIP	180	5%	1/10W
R914	1-216-031-00	METAL CHIP	180	5%	1/10W
R915	1-216-031-00	METAL CHIP	180	5%	1/10W
R916	1-216-031-00	METAL CHIP	180	5%	1/10W
R917	1-216-031-00	METAL CHIP	180	5%	1/10W
R918	1-216-031-00	METAL CHIP	180	5%	1/10W
R919	1-216-031-00	METAL CHIP	180	5%	1/10W
R920	1-216-031-00	METAL CHIP	180	5%	1/10W
R921	1-216-031-00	METAL CHIP	180	5%	1/10W
R922	1-216-031-00	METAL CHIP	180	5%	1/10W
R923	1-216-031-00	METAL CHIP	180	5%	1/10W
R924	1-216-031-00	METAL CHIP	180	5%	1/10W
R925	1-216-031-00	METAL CHIP	180	5%	1/10W
R926	1-216-031-00	METAL CHIP	180	5%	1/10W
R927	1-216-031-00	METAL CHIP	180	5%	1/10W
R928	1-216-031-00	METAL CHIP	180	5%	1/10W
R929	1-216-031-00	METAL CHIP	180	5%	1/10W
R930	1-216-031-00	METAL CHIP	180	5%	1/10W
R931	1-216-031-00	METAL CHIP	180	5%	1/10W
R932	1-216-031-00	METAL CHIP	180	5%	1/10W
R933	1-216-031-00	METAL CHIP	180	5%	1/10W
R934	1-216-031-00	METAL CHIP	180	5%	1/10W
R935	1-216-031-00	METAL CHIP	180	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R936	1-216-031-00	METAL CHIP	180	5%	1/10W
R937	1-216-031-00	METAL CHIP	180	5%	1/10W
R938	1-216-031-00	METAL CHIP	180	5%	1/10W
R939	1-216-031-00	METAL CHIP	180	5%	1/10W
R940	1-216-031-00	METAL CHIP	180	5%	1/10W
R941	1-216-031-00	METAL CHIP	180	5%	1/10W
R942	1-216-031-00	METAL CHIP	180	5%	1/10W
R943	1-216-031-00	METAL CHIP	180	5%	1/10W
R944	1-216-031-00	METAL CHIP	180	5%	1/10W
R945	1-216-031-00	METAL CHIP	180	5%	1/10W
R946	1-216-031-00	METAL CHIP	180	5%	1/10W
R947	1-216-031-00	METAL CHIP	180	5%	1/10W
R948	1-216-031-00	METAL CHIP	180	5%	1/10W
R949	1-216-031-00	METAL CHIP	180	5%	1/10W
R950	1-216-031-00	METAL CHIP	180	5%	1/10W
R951	1-216-031-00	METAL CHIP	180	5%	1/10W
R952	1-216-031-00	METAL CHIP	180	5%	1/10W
R953	1-216-031-00	METAL CHIP	180	5%	1/10W
R954	1-216-031-00	METAL CHIP	180	5%	1/10W
R955	1-216-031-00	METAL CHIP	180	5%	1/10W
R956	1-216-031-00	METAL CHIP	180	5%	1/10W
R957	1-216-031-00	METAL CHIP	180	5%	1/10W
R958	1-216-031-00	METAL CHIP	180	5%	1/10W
R959	1-216-031-00	METAL CHIP	180	5%	1/10W
R960	1-216-031-00	METAL CHIP	180	5%	1/10W
R961	1-216-031-00	METAL CHIP	180	5%	1/10W
R962	1-216-031-00	METAL CHIP	180	5%	1/10W
R963	1-216-031-00	METAL CHIP	180	5%	1/10W
R964	1-216-031-00	METAL CHIP	180	5%	1/10W
R965	1-216-031-00	METAL CHIP	180	5%	1/10W
R966	1-216-031-00	METAL CHIP	180	5%	1/10W
R967	1-216-031-00	METAL CHIP	180	5%	1/10W
R968	1-216-031-00	METAL CHIP	180	5%	1/10W
R969	1-216-031-00	METAL CHIP	180	5%	1/10W
R970	1-216-031-00	METAL CHIP	180	5%	1/10W
R971	1-216-031-00	METAL CHIP	180	5%	1/10W
R972	1-216-031-00	METAL CHIP	180	5%	1/10W
R973	1-216-031-00	METAL CHIP	180	5%	1/10W
R974	1-216-031-00	METAL CHIP	180	5%	1/10W
R975	1-216-031-00	METAL CHIP	180	5%	1/10W
R976	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R977	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R978	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R979	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R980	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R981	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R982	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R983	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R984	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R985	1-216-089-91	METAL GLAZE	47K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R986	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R989	1-216-031-00	METAL CHIP	180	5%	1/10W
R990	1-216-031-00	METAL CHIP	180	5%	1/10W
R991	1-216-031-00	METAL CHIP	180	5%	1/10W
R992	1-216-031-00	METAL CHIP	180	5%	1/10W
R993	1-216-031-00	METAL CHIP	180	5%	1/10W
R994	1-216-031-00	METAL CHIP	180	5%	1/10W
R995	1-216-097-00	METAL CHIP	100K	5%	1/10W
R997	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R998	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R999	1-216-089-91	METAL GLAZE	47K	5%	1/10W
		< SWITCH >			
S901	1-571-787-11	SWITCH, TACTILE (SET)			
S902	1-571-787-11	SWITCH, TACTILE (DATA)			
S903	1-571-787-11	SWITCH, TACTILE (MENU)			
S904	1-571-787-11	SWITCH, TACTILE (SCREEN)			
S905	1-571-787-11	SWITCH, TACTILE (+)			
S906	1-571-787-11	SWITCH, TACTILE (-)			
S907	1-571-787-11	SWITCH, TACTILE (DEL)			
S908	1-571-787-11	SWITCH, TACTILE (DIS/ENA)			
S909	1-571-787-11	SWITCH, TACTILE (A-BUS P1)			
S910	1-571-787-11	SWITCH, TACTILE (A-BUS P2)			
S911	1-571-787-11	SWITCH, TACTILE (A-BUS AUX1)			
S912	1-571-787-11	SWITCH, TACTILE (B-BUS P1)			
S913	1-571-787-11	SWITCH, TACTILE (B-BUS P2)			
S914	1-571-787-11	SWITCH, TACTILE (B-BUS AUX2)			
S915	1-571-787-11	SWITCH, TACTILE (PLAYER 2 RESET)			
S916	1-571-787-11	SWITCH, TACTILE (PLAYER 1 RESET)			
S917	1-571-787-11	SWITCH, TACTILE (RECORDER RESET)			
**********					
*	A-7066-121-A	DV-19 (P) BOARD, COMPLETE			
		**********			
		(Ref. No. 7,000 Seriese)			
	1-751-564-11	CABLE, FLAT (FUP-1)			
	1-751-569-11	CABLE, FLAT (FAC-1)			
*	3-957-074-01	CASE (DV-19) (UPPER), SHIELD			
*	3-957-076-01	CASE (DV-19) (LOWER), SHIELD			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
		< CAPACITOR >			
C001	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C002	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C003	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C004	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C005	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C006	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C007	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C008	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C009	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C010	1-162-923-11	CERAMIC CHIP	47PF	5%	50V

Ref. No.	Part No.	Description			Remarks
C011	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C012	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C013	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C014	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C015	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C016	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C017	1-124-779-00	ELECT CHIP	10uF	20%	16V
C018	1-124-779-00	ELECT CHIP	10uF	20%	16V
C019	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C020	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C021	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C022	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C023	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C024	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C025	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C026	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C027	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C028	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C029	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C030	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C031	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C032	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C033	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C034	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C035	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C036	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C037	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C038	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C039	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C040	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C041	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C042	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C043	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C044	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C045	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C046	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C047	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C048	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C049	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C050	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C051	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C052	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C053	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C054	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C055	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C056	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C057	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C058	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C059	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C061	1-126-206-11	ELECT CHIP	100uF	20%	6.3V

Ref. No.	Part No.	Description			Remarks
C065	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C066	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C067	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C069	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C070	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C071	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C072	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C073	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C101	1-126-204-11	ELECT CHIP	47uF	20%	16V
C102	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C103	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C104	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C105	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C106	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C107	1-126-204-11	ELECT CHIP	47uF	20%	16V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C110	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C111	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C112	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C113	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C114	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C115	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C116	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C117	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C118	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C119	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C120	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C121	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C123	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C125	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C126	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C127	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C128	1-126-204-11	ELECT CHIP	47uF	20%	16V
C129	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C130	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C131	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C132	1-126-204-11	ELECT CHIP	47uF	20%	16V
C133	1-126-204-11	ELECT CHIP	47uF	20%	16V
C134	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C135	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C136	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C137	1-164-185-11	CERAMIC CHIP	13PF	5%	50V
C138	1-126-204-11	ELECT CHIP	47uF	20%	16V
C139	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C140	1-164-382-11	CERAMIC CHIP	91PF	5%	50V
C141	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C142	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C143	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remarks
C144	1-126-204-11	ELECT CHIP	47uF	20%	16V
C145	1-126-204-11	ELECT CHIP	47uF	20%	16V
C146	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C147	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C148	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C149	1-126-204-11	ELECT CHIP	47uF	20%	16V
C150	1-126-204-11	ELECT CHIP	47uF	20%	16V
C151	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C152	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C153	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C154	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C155	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C156	1-126-204-11	ELECT CHIP	47uF	20%	16V
C157	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C158	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C159	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C160	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C161	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C162	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C163	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C164	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C165	1-128-453-21	ELECT CHIP	47uF	20%	6.3V
C166	1-162-924-11	CERAMIC CHIP	56PF	5%	50V
C201	1-124-779-00	ELECT CHIP	10uF	20%	16V
C202	1-124-779-00	ELECT CHIP	10uF	20%	16V
C203	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-124-779-00	ELECT CHIP	10uF	20%	16V
C206	1-124-779-00	ELECT CHIP	10uF	20%	16V
C207	1-124-779-00	ELECT CHIP	10uF	20%	16V
C208	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C209	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C210	1-124-779-00	ELECT CHIP	10uF	20%	16V
C211	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C212	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C213	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C214	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C215	1-124-779-00	ELECT CHIP	10uF	20%	16V
C216	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C217	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C218	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C219	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C220	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C221	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C222	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C223	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C224	1-126-204-11	ELECT CHIP	47uF	20%	16V
C225	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C226	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C227	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

DV-19

Ref. No.	Part No.	Description			Remarks
C228	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C229	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C230	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C231	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C232	1-124-779-00	ELECT CHIP	10uF	20%	16V
C233	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C234	1-164-346-11	CERAMIC CHIP	1uF		16V
C235	1-124-779-00	ELECT CHIP	10uF	20%	16V
C236	1-164-490-11	CERAMIC CHIP	0.068uF		16V
C237	1-164-346-11	CERAMIC CHIP	1uF		16V
C238	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C239	1-124-779-00	ELECT CHIP	10uF	20%	16V
C240	1-124-779-00	ELECT CHIP	10uF	20%	16V
C241	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C242	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C243	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C244	1-164-676-11	CERAMIC CHIP	2200PF	5%	16V
C245	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C246	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C247	1-126-191-11	ELECT	0.47uF	20%	50V
C248	1-124-779-00	ELECT CHIP	10uF	20%	16V
C249	1-164-185-11	CERAMIC CHIP	13PF	5%	50V
C250	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C251	1-164-382-11	CERAMIC CHIP	91PF	5%	50V
C252	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C253	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C254	1-124-779-00	ELECT CHIP	10uF	20%	16V
C255	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C256	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C257	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C258	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C259	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C260	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C261	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C262	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C263	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C264	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C265	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C266	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C267	1-124-779-00	ELECT CHIP	10uF	20%	16V
C268	1-124-779-00	ELECT CHIP	10uF	20%	16V
C269	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C270	1-164-238-11	CERAMIC CHIP	36PF	5%	50V
C301	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C302	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C303	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C304	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C305	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C306	1-124-779-00	ELECT CHIP	10uF	20%	16V
C307	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C308	1-126-204-11	ELECT CHIP	47uF	20%	16V
C309	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C310	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C311	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C312	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C401	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C402	1-124-779-00	ELECT CHIP	10uF	20%	16V
C403	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C406	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C407	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C408	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C409	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C410	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C419	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C420	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C421	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C451	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C452	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C453	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C454	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C455	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C456	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C457	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C458	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C459	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C460	1-162-958-11	CERAMIC CHIP	270PF	5%	50V
C461	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C462	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C463	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C464	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C465	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C466	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C467	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C468	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C469	1-164-237-11	CERAMIC CHIP	16PF	5%	50V
C470	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C471	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C472	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C501	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C502	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C503	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C504	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C505	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C506	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C507	1-124-779-00	ELECT CHIP	10uF	20%	16V
C508	1-124-779-00	ELECT CHIP	10uF	20%	16V
C509	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C510	1-162-927-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description			Remarks
C511	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C512	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C513	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C514	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C515	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C516	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C517	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C518	1-124-779-00	ELECT CHIP	10uF	20%	16V
C519	1-124-779-00	ELECT CHIP	10uF	20%	16V
C520	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C521	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C522	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C523	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C524	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C525	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C526	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C527	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C528	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C529	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C530	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C531	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C532	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C533	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C534	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C535	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C536	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C537	1-124-779-00	ELECT CHIP	10uF	20%	16V
C538	1-124-779-00	ELECT CHIP	10uF	20%	16V
C539	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C540	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C541	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C542	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C543	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C544	1-128-415-11	ELECT CHIP	68uF	20%	10V
C545	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C546	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C547	1-128-415-11	ELECT CHIP	68uF	20%	10V
C548	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C549	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C550	1-124-779-00	ELECT CHIP	10uF	20%	16V
C551	1-124-779-00	ELECT CHIP	10uF	20%	16V
C553	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C554	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C555	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C556	1-124-779-00	ELECT CHIP	10uF	20%	16V
C557	1-124-779-00	ELECT CHIP	10uF	20%	16V
C559	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C560	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C561	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C562	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remarks
C563	1-124-779-00	ELECT CHIP	10uF	20%	16V
C564	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C565	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C566	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C567	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C568	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C569	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C570	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C571	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C572	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C573	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C574	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C575	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C576	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C577	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C578	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C579	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C580	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C581	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C582	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C583	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C584	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C585	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C586	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C587	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C588	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C589	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C590	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C591	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C592	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C593	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C594	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C595	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C596	1-128-415-11	ELECT CHIP	68uF	20%	10V
C597	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C598	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C599	1-164-218-11	CERAMIC CHIP	180PF	5%	50V
C601	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C602	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C603	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C604	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C606	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C607	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C608	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C609	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C610	1-124-779-00	ELECT CHIP	10uF	20%	16V
C611	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C612	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C613	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C614	1-164-005-11	CERAMIC CHIP	0.47uF		25V

DV-19

Ref. No.	Part No.	Description			Remarks
C615	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C616	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C617	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C618	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C619	1-124-779-00	ELECT CHIP	10uF	20%	16V
C620	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C621	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C622	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C623	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C624	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C625	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C626	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C627	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C628	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C629	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C630	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C631	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C632	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C633	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C634	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C635	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C636	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C637	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C638	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C639	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C640	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C641	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C642	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C643	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C644	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C645	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C646	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C647	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C648	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C649	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C650	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C651	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C652	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C653	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C654	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C655	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C656	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C657	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C658	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C659	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C660	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C661	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C662	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C663	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C664	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remarks
C665	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C666	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C667	1-124-779-00	ELECT CHIP	10uF	20%	16V
C668	1-124-779-00	ELECT CHIP	10uF	20%	16V
C669	1-124-779-00	ELECT CHIP	10uF	20%	16V
C670	1-124-779-00	ELECT CHIP	10uF	20%	16V
C671	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C672	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C673	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C674	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C675	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C676	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C677	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C678	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C679	1-124-779-00	ELECT CHIP	10uF	20%	16V
C680	1-124-779-00	ELECT CHIP	10uF	20%	16V
C681	1-124-779-00	ELECT CHIP	10uF	20%	16V
C682	1-124-779-00	ELECT CHIP	10uF	20%	16V
C683	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C684	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C685	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C686	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C687	1-124-779-00	ELECT CHIP	10uF	20%	16V
C688	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C689	1-124-779-00	ELECT CHIP	10uF	20%	16V
C690	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C691	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C692	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C693	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C694	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C695	1-164-185-11	CERAMIC CHIP	13PF	5%	50V
C696	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C697	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C698	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C699	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C701	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C702	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C704	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C710	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C713	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C714	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C715	1-124-779-00	ELECT CHIP	10uF	20%	16V
C716	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C717	1-124-779-00	ELECT CHIP	10uF	20%	16V
C718	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C719	1-124-779-00	ELECT CHIP	10uF	20%	16V
C720	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C721	1-124-779-00	ELECT CHIP	10uF	20%	16V
C722	1-124-779-00	ELECT CHIP	10uF	20%	16V
C723	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remarks
C725	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C726	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C727	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C728	1-124-779-00	ELECT CHIP	10uF	20%	16V
C729	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C766	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C767	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C768	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C769	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C770	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C771	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C772	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C773	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C774	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C775	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C777	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C778	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C801	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C802	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C803	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C804	1-124-779-00	ELECT CHIP	10uF	20%	16V
C805	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C806	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C807	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C808	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C809	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C810	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C811	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C812	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C813	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C814	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C815	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C816	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C817	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C818	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C819	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C820	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C821	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C822	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C823	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C824	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C825	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C826	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C827	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C828	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C829	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C830	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C831	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C832	1-124-779-00	ELECT CHIP	10uF	20%	16V
C833	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V

Ref. No.	Part No.	Description			Remarks
C834	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C835	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C836	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C837	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C838	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C839	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C840	1-124-779-00	ELECT CHIP	10uF	20%	16V
C841	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C842	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C843	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C844	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C845	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C846	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C847	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C848	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C849	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C850	1-164-185-11	CERAMIC CHIP	13PF	5%	50V
C851	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C852	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C853	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C854	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C855	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C856	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C857	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C858	1-164-382-11	CERAMIC CHIP	91PF	5%	50V
C859	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C860	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C861	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C862	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C863	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C864	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C865	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C866	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C867	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C868	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C869	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C870	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C871	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C872	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C873	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C874	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C875	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C876	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C877	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C878	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C879	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C880	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C881	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C882	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C883	1-164-005-11	CERAMIC CHIP	0.47uF		25V

DV-19

Ref. No.	Part No.	Description			Remarks
C884	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C885	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C886	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C887	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C888	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C889	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C890	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C891	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C892	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C893	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C894	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C895	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C896	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C897	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C898	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C899	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C901	1-128-415-11	ELECT CHIP	68uF	20%	10V
C902	1-126-204-11	ELECT CHIP	47uF	20%	16V
C903	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C904	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C905	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C906	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C907	1-126-204-11	ELECT CHIP	47uF	20%	16V
C908	1-164-382-11	CERAMIC CHIP	91PF	5%	50V
C909	1-128-415-11	ELECT CHIP	68uF	20%	10V
C910	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C950	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C951	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C952	1-126-204-11	ELECT CHIP	47uF	20%	16V
C953	1-164-670-11	CERAMIC CHIP	1200PF	5%	16V
C954	1-165-176-11	CERAMIC CHIP	4700PF	10%	16V
C957	1-126-204-11	ELECT CHIP	47uF	20%	16V
C958	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C959	1-126-204-11	ELECT CHIP	47uF	20%	16V
C960	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C961	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C962	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C963	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C964	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C965	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C966	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C967	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C968	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C969	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C970	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C971	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C972	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C973	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C974	1-162-923-11	CERAMIC CHIP	47PF	5%	50V

Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >	
CN001	1-580-723-11	CONNECTOR, BOARD TO BOARD 28P	
CN002	1-580-723-11	CONNECTOR, BOARD TO BOARD 28P	
* CN201	1-564-009-11	PIN, CONNECTOR 10P	
CN501	1-580-723-11	CONNECTOR, BOARD TO BOARD 28P	
CN502	1-580-723-11	CONNECTOR, BOARD TO BOARD 28P	
CN503	1-580-723-11	CONNECTOR, BOARD TO BOARD 28P	
CN504	1-580-723-11	CONNECTOR, BOARD TO BOARD 28P	
CN601	1-506-479-11	PIN, CONNECTOR 14P	
* CN602	1-564-007-11	PIN, CONNECTOR 8P	
CN701	1-691-397-11	CONNECTOR, FPC 21P	
* CN702	1-691-781-11	CONNECTOR, FPC 10P	
		< VARIABLE CAPACITOR >	
CV502	1-141-450-21	CAP, ADJ	
		< DIODE >	
D001	8-719-800-76	DIODE 1SS226	
D002	8-719-800-76	DIODE 1SS226	
D101	8-719-800-76	DIODE 1SS226	
D102	8-719-800-76	DIODE 1SS226	
D103	8-719-800-76	DIODE 1SS226	
D104	8-719-800-76	DIODE 1SS226	
D301	8-719-800-76	DIODE 1SS226	
D302	8-719-800-76	DIODE 1SS226	
D303	8-719-800-76	DIODE 1SS226	
D304	8-719-800-76	DIODE 1SS226	
D305	8-719-800-76	DIODE 1SS226	
D501	8-719-988-40	DIODE HVR17TRF	
D502	8-719-988-40	DIODE HVR17TRF	
D602	8-719-800-76	DIODE 1SS226	
		< FERRITE BEAD >	
FB001	1-543-775-11	FILTER, EMI	
FB002	1-543-775-11	FILTER, EMI	
FB003	1-543-775-11	FILTER, EMI	
FB004	1-543-775-11	FILTER, EMI	
FB005	1-543-775-11	FILTER, EMI	
FB006	1-543-775-11	FILTER, EMI	
FB007	1-543-775-11	FILTER, EMI	
FB008	1-543-775-11	FILTER, EMI	
FB009	1-543-775-11	FILTER, EMI	
FB010	1-543-775-11	FILTER, EMI	
FB011	1-543-775-11	FILTER, EMI	
FB012	1-543-775-11	FILTER, EMI	
FB013	1-543-775-11	FILTER, EMI	
FB014	1-543-775-11	FILTER, EMI	
FB015	1-543-775-11	FILTER, EMI	

Ref. No.	Part No.	Description	Remarks
FB016	1-543-775-11	FILTER, EMI	
FB017	1-543-813-21	FILTER, EMI	
FB018	1-543-813-21	FILTER, EMI	
FB019	1-543-813-21	FILTER, EMI	
FB020	1-543-813-21	FILTER, EMI	
FB021	1-543-813-21	FILTER, EMI	
FB022	1-543-813-21	FILTER, EMI	
FB023	1-543-813-21	FILTER, EMI	
FB024	1-543-813-21	FILTER, EMI	
FB025	1-543-813-21	FILTER, EMI	
FB026	1-543-813-21	FILTER, EMI	
FB027	1-543-813-21	FILTER, EMI	
FB028	1-543-775-11	FILTER, EMI	
FB029	1-543-775-11	FILTER, EMI	
FB030	1-543-775-11	FILTER, EMI	
FB031	1-543-775-11	FILTER, EMI	
FB032	1-543-775-11	FILTER, EMI	
FB033	1-543-775-11	FILTER, EMI	
FB034	1-543-775-11	FILTER, EMI	
FB035	1-543-775-11	FILTER, EMI	
FB101	1-543-775-11	FILTER, EMI	
FB102	1-543-775-11	FILTER, EMI	
FB103	1-543-775-11	FILTER, EMI	
FB104	1-543-775-11	FILTER, EMI	
FB105	1-543-775-11	FILTER, EMI	
FB106	1-543-775-11	FILTER, EMI	
FB201	1-543-813-21	FILTER, EMI	
FB202	1-543-813-21	FILTER, EMI	
FB203	1-543-813-21	FILTER, EMI	
FB204	1-543-813-21	FILTER, EMI	
FB205	1-543-813-21	FILTER, EMI	
FB206	1-543-813-21	FILTER, EMI	
FB301	1-543-813-21	FILTER, EMI	
FB302	1-543-813-21	FILTER, EMI	
FB303	1-543-813-21	FILTER, EMI	
FB304	1-543-813-21	FILTER, EMI	
FB305	1-543-813-21	FILTER, EMI	
FB306	1-543-813-21	FILTER, EMI	
FB307	1-543-813-21	FILTER, EMI	
FB308	1-543-813-21	FILTER, EMI	
FB351	1-543-813-21	FILTER, EMI	
FB352	1-543-813-21	FILTER, EMI	
FB353	1-543-813-21	FILTER, EMI	
FB354	1-543-813-21	FILTER, EMI	
FB355	1-543-813-21	FILTER, EMI	
FB356	1-543-813-21	FILTER, EMI	
FB357	1-543-813-21	FILTER, EMI	
FB501	1-543-813-21	FILTER, EMI	
FB502	1-543-813-21	FILTER, EMI	
FB503	1-543-813-21	FILTER, EMI	
FB504	1-543-813-21	FILTER, EMI	
FB505	1-543-813-21	FILTER, EMI	
FB506	1-543-813-21	FILTER, EMI	
FB507	1-543-813-21	FILTER, EMI	
FB508	1-543-813-21	FILTER, EMI	
FB509	1-543-813-21	FILTER, EMI	
FB510	1-543-775-11	FILTER, EMI	
FB511	1-543-775-11	FILTER, EMI	
FB512	1-543-775-11	FILTER, EMI	
FB513	1-543-775-11	FILTER, EMI	
FB514	1-543-775-11	FILTER, EMI	
FB515	1-543-775-11	FILTER, EMI	
FB516	1-543-775-11	FILTER, EMI	
FB517	1-543-775-11	FILTER, EMI	
FB518	1-543-775-11	FILTER, EMI	
FB519	1-543-775-11	FILTER, EMI	
FB520	1-543-775-11	FILTER, EMI	
FB521	1-543-775-11	FILTER, EMI	
FB522	1-543-775-11	FILTER, EMI	
FB523	1-543-775-11	FILTER, EMI	
FB524	1-543-775-11	FILTER, EMI	
FB525	1-543-775-11	FILTER, EMI	
FB526	1-543-775-11	FILTER, EMI	
FB527	1-543-775-11	FILTER, EMI	
FB528	1-543-775-11	FILTER, EMI	
FB529	1-543-775-11	FILTER, EMI	
FB530	1-543-775-11	FILTER, EMI	
FB531	1-543-775-11	FILTER, EMI	
FB532	1-543-775-11	FILTER, EMI	
FB533	1-543-775-11	FILTER, EMI	
FB534	1-543-775-11	FILTER, EMI	
FB535	1-543-775-11	FILTER, EMI	
FB536	1-543-775-11	FILTER, EMI	
FB537	1-543-775-11	FILTER, EMI	
FB538	1-543-775-11	FILTER, EMI	
FB539	1-543-775-11	FILTER, EMI	
FB540	1-543-775-11	FILTER, EMI	
FB541	1-543-775-11	FILTER, EMI	
FB542	1-543-775-11	FILTER, EMI	
FB543	1-543-775-11	FILTER, EMI	
FB544	1-543-775-11	FILTER, EMI	
FB545	1-543-775-11	FILTER, EMI	
FB546	1-543-775-11	FILTER, EMI	
FB547	1-543-775-11	FILTER, EMI	
FB548	1-543-813-21	FILTER, EMI	
FB601	1-543-813-21	FILTER, EMI	
FB602	1-543-813-21	FILTER, EMI	
FB603	1-543-813-21	FILTER, EMI	
FB604	1-543-813-21	FILTER, EMI	
FB605	1-543-813-21	FILTER, EMI	

DV-19

Ref. No.	Part No.	Description	Remarks
FB606	1-543-813-21	FILTER, EMI	
FB607	1-543-813-21	FILTER, EMI	
FB608	1-543-813-21	FILTER, EMI	
FB609	1-543-813-21	FILTER, EMI	
FB610	1-543-813-21	FILTER, EMI	
FB611	1-543-813-21	FILTER, EMI	
FB612	1-543-813-21	FILTER, EMI	
FB613	1-543-813-21	FILTER, EMI	
FB614	1-543-813-21	FILTER, EMI	
FB628	1-543-813-21	FILTER, EMI	
FB629	1-543-813-21	FILTER, EMI	
FB700	1-543-813-21	FILTER, EMI	
FB701	1-543-813-21	FILTER, EMI	
FB702	1-543-813-21	FILTER, EMI	
FB703	1-543-813-21	FILTER, EMI	
FB704	1-543-813-21	FILTER, EMI	
FB705	1-543-813-21	FILTER, EMI	
FB706	1-543-813-21	FILTER, EMI	
FB707	1-543-813-21	FILTER, EMI	
FB708	1-543-813-21	FILTER, EMI	
FB709	1-543-813-21	FILTER, EMI	
FB710	1-543-813-21	FILTER, EMI	
FB711	1-543-813-21	FILTER, EMI	
FB713	1-543-813-21	FILTER, EMI	
FB714	1-543-813-21	FILTER, EMI	
FB715	1-543-813-21	FILTER, EMI	
FB716	1-543-813-21	FILTER, EMI	
FB717	1-543-813-21	FILTER, EMI	
FB718	1-543-813-21	FILTER, EMI	
FB719	1-543-813-21	FILTER, EMI	
FB720	1-543-813-21	FILTER, EMI	
FB721	1-543-813-21	FILTER, EMI	
FB722	1-543-813-21	FILTER, EMI	
FB723	1-543-813-21	FILTER, EMI	
FB724	1-543-813-21	FILTER, EMI	
FB725	1-543-813-21	FILTER, EMI	
FB726	1-543-813-21	FILTER, EMI	
FB727	1-543-813-21	FILTER, EMI	
FB728	1-543-813-21	FILTER, EMI	
FB729	1-543-813-21	FILTER, EMI	
FB730	1-543-813-21	FILTER, EMI	
FB731	1-543-813-21	FILTER, EMI	
FB732	1-543-813-21	FILTER, EMI	
FB733	1-543-813-21	FILTER, EMI	
FB734	1-543-813-21	FILTER, EMI	
FB735	1-543-813-21	FILTER, EMI	
FB736	1-543-813-21	FILTER, EMI	
FB737	1-543-813-21	FILTER, EMI	
FB738	1-543-813-21	FILTER, EMI	
FB739	1-543-813-21	FILTER, EMI	

Ref. No.	Part No.	Description	Remarks
FB740	1-543-813-21	FILTER, EMI	
FB741	1-543-813-21	FILTER, EMI	
FB742	1-543-813-21	FILTER, EMI	
FB743	1-543-813-21	FILTER, EMI	
FB744	1-543-813-21	FILTER, EMI	
FB745	1-543-813-21	FILTER, EMI	
FB746	1-543-813-21	FILTER, EMI	
FB747	1-543-813-21	FILTER, EMI	
FB748	1-543-813-21	FILTER, EMI	
FB749	1-543-813-21	FILTER, EMI	
FB750	1-543-813-21	FILTER, EMI	
FB751	1-543-813-21	FILTER, EMI	
FB752	1-543-813-21	FILTER, EMI	
FB753	1-543-813-21	FILTER, EMI	
FB754	1-543-813-21	FILTER, EMI	
FB755	1-543-813-21	FILTER, EMI	
FB756	1-543-813-21	FILTER, EMI	
FB757	1-543-813-21	FILTER, EMI	
FB758	1-543-813-21	FILTER, EMI	
FB759	1-543-813-21	FILTER, EMI	
FB760	1-543-813-21	FILTER, EMI	
FB761	1-543-813-21	FILTER, EMI	
FB762	1-543-813-21	FILTER, EMI	
FB763	1-543-813-21	FILTER, EMI	
FB764	1-543-813-21	FILTER, EMI	
FB765	1-543-813-21	FILTER, EMI	
FB766	1-543-813-21	FILTER, EMI	
FB767	1-543-813-21	FILTER, EMI	
FB768	1-543-813-21	FILTER, EMI	
FB769	1-543-813-21	FILTER, EMI	
FB770	1-543-813-21	FILTER, EMI	
FB771	1-543-813-21	FILTER, EMI	
FB772	1-543-813-21	FILTER, EMI	
FB773	1-543-813-21	FILTER, EMI	
FB774	1-543-813-21	FILTER, EMI	
FB775	1-543-813-21	FILTER, EMI	
FB776	1-543-813-21	FILTER, EMI	
FB777	1-543-813-21	FILTER, EMI	
FB778	1-543-813-21	FILTER, EMI	
FB779	1-543-813-21	FILTER, EMI	
FB780	1-543-813-21	FILTER, EMI	
FB781	1-543-813-21	FILTER, EMI	
FB782	1-543-813-21	FILTER, EMI	
FB783	1-543-813-21	FILTER, EMI	
FB784	1-543-813-21	FILTER, EMI	
FB785	1-543-813-21	FILTER, EMI	
FB786	1-543-813-21	FILTER, EMI	
FB787	1-543-813-21	FILTER, EMI	
FB788	1-543-813-21	FILTER, EMI	
FB789	1-543-813-21	FILTER, EMI	

Ref. No.	Part No.	Description	Remarks
FB790	1-543-813-21	FILTER, EMI	
FB791	1-543-813-21	FILTER, EMI	
FB792	1-543-813-21	FILTER, EMI	
FB793	1-543-813-21	FILTER, EMI	
FB794	1-543-813-21	FILTER, EMI	
FB795	1-543-813-21	FILTER, EMI	
FB796	1-543-813-21	FILTER, EMI	
FB797	1-543-813-21	FILTER, EMI	
FB798	1-543-813-21	FILTER, EMI	
FB799	1-543-813-21	FILTER, EMI	
FB951	1-543-813-21	FILTER, EMI	
FB952	1-543-813-21	FILTER, EMI	
FB953	1-543-813-21	FILTER, EMI	
FB954	1-543-813-21	FILTER, EMI	
FB955	1-543-813-21	FILTER, EMI	
FB956	1-543-813-21	FILTER, EMI	
FB957	1-543-813-21	FILTER, EMI	
FB958	1-543-813-21	FILTER, EMI	
FB959	1-543-813-21	FILTER, EMI	
FB960	1-543-813-21	FILTER, EMI	
		< FILTER >	
FL101	1-415-551-11	DELAY LINE 140NS	
FL401	1-239-593-21	FILTER, LC	
FL402	1-239-593-21	FILTER, LC	
FL501	1-236-071-11	ENCAPSULATED COMPONENT	
FL950	1-236-381-11	LPF	
FL951	1-236-381-11	LPF	
		< IC >	
IC001	8-752-334-55	IC CXD1175AM (A/D CONVERTER)	
IC002	8-752-334-55	IC CXD1175AM (A/D CONVERTER)	
IC003	8-752-342-61	IC CXD2105AQ (DIGITAL Y/C SEPARATOR (WITH D/A CONVERTER))	
IC004	8-752-342-61	IC CXD2105AQ (DIGITAL Y/C SEPARATOR (WITH D/A CONVERTER))	
IC005	8-759-710-12	IC NJM2230M (A-BUS SYNC DET)	
IC006	8-759-710-12	IC NJM2230M (B-BUS SYNC DET)	
IC101	8-759-032-14	IC MC74HC08AF (GATE)	
IC102	8-759-030-55	IC MC1496M (B-Y MOD)	
IC103	8-759-030-55	IC MC1496M (R-Y MOD)	
IC104	8-752-033-58	IC V7040 (NTSC/PAL ENCODER)	
IC105	8-759-030-55	IC MC1496M (R-Y MOD)	
IC106	8-759-030-55	IC MC1496M (B-Y MOD)	
IC107	8-759-011-65	IC MC74HC4053F (SWITCH)	
IC108	8-759-150-06	IC uPC324G2-E2 (AGC DET AMP)	
IC109	8-759-504-47	IC TL026CPS (VCA)	
IC110	8-759-242-74	IC TC7W04F (BUFFER)	
IC201	8-759-011-65	IC MC74HC4053F (SELECT SW)	
IC202	8-759-710-62	IC NJM2246M (V/PGM SELECT SWITCH)	
IC203	8-759-011-65	IC MC74HC4053F (EV BST SELECT)	

Ref. No.	Part No.	Description	Remarks
IC204	8-759-603-56	IC M51272FP (NTSC/PAL ENCODER)	
IC205	8-759-710-61	IC NJM2229M (SYNC SEPARATOR)	
IC206	8-759-630-81	IC M50455-079FP (CHARACTOR GENERATOR)	
IC207	8-759-242-74	IC TC7W04F (INV)	
IC301	8-759-032-20	IC MC74HC32AF (DELAY)	
IC302	8-759-239-23	IC TC74HC86AF (GATE)	
IC303	8-759-032-23	IC MC74HC74AF (DATA LATCH)	
IC304	8-759-011-65	IC MC74HC4053F (SELECT SW)	
IC305	8-759-032-01	IC MC74HC00AF (GATE)	
IC307	8-759-011-65	IC MC74HC4053F (SELECT SW)	
IC308	8-759-011-65	IC MC74HC4053F (SELECT SW)	
IC401	8-759-242-74	IC TC7W04F (INV)	
IC402	8-759-925-78	IC SN74HC10ANS (SELECT GATE)	
IC403	8-752-053-21	IC CXA1211M (VCA)	
IC404	8-759-230-XX	IC TC74HC4053AF (R/BC SELECT SW)	
IC405	8-759-230-XX	IC TC74HC4053AF (R/BC SELECT SW)	
IC406	8-759-230-XX	IC TC74HC4053AF (R/BC SELECT SW)	
IC407	8-759-230-XX	IC TC74HC4053AF (R/BC SELECT SW)	
IC501	8-759-242-74	IC TC7W04F (CHROMA HUE PHASE SHIFTER)	
IC502	8-759-242-74	IC TC7W04F (CHROMA HUE PHASE SHIFTER)	
IC503	8-759-902-88	IC SN74LS123NS (M.M)	
IC504	8-752-332-67	IC CXD1217M (SYNC GENELATOR)	
IC505	8-759-030-16	IC MC34182M (CHROMA HUE PHASE SHIFTER)	
IC506	8-759-902-88	IC SN74LS123NS (M.M)	
IC507	8-759-032-50	IC MC74HC241AF (SYNC DRIVER)	
IC508	8-759-242-74	IC TC7W04F (INV)	
IC509	8-759-822-XX	IC L88MS05T-FA-TL (+5V REG)	
IC510	8-759-822-XX	IC L88MS05T-FA-TL (+5V REG)	
IC511	8-759-242-68	IC TC7W32F (READOUT BLKG)	
IC512	8-759-822-XX	IC L88MS05T-FA-TL (+5V REG)	
IC513	8-759-822-XX	IC L88MS05T-FA-TL (+5V REG)	
IC514	8-759-030-16	IC MC34182M (CHROMA HUE PHASE SHIFTER)	
IC515	8-759-902-88	IC SN74LS123NS (M.M)	
IC516	8-759-055-75	IC uPD75104G-633-1B (MEMORY CONTROL MICROCOMPUTER)	
IC517	8-759-206-28	IC TC74HC123F (M.M)	
IC518	8-759-926-98	IC SN74HC4040ANS (ADVANCE SYNC GENERATOR)	
IC519	8-759-030-16	IC MC34182M (HCENT PHASE SHIFTER)	
IC520	8-759-926-08	IC SN74HC133NS (ADVANCE SYNC GENERATOR)	
IC521	8-759-907-81	IC SN74LS221NS (M.M)	
IC522	8-759-032-23	IC MC74HC74AF (D-LATCH)	
IC523	8-752-332-67	IC CXD1217M (SYNC GENERATOR)	
IC524	8-752-306-51	IC CX23065A (PHASE COMP)	
IC525	8-759-032-01	IC MC74HC00AF (KEY START SELECT)	
IC526	8-759-242-74	IC TC7W04F (MAIN & WIPE MICON CLOCK GENERATOR)	
IC527	8-759-242-76	IC TC7W08F (GATE)	
IC528	8-759-822-XX	IC L88MS05T-FA-TL (+5V REG)	
IC529	8-759-277-76	IC uPD78P324GJ-5BJ-991 (WIPE GEOME TRY PROCESSOR)	
IC530	8-759-242-74	IC TC7W04F (AMP)	

DV-19

Ref. No.	Part No.	Description	Remarks
IC531	8-759-979-37	IC MSM72H017GS-VK (WIPE PATTERN GENERATOR)	
IC532	8-759-032-23	IC MC74HC74AF (D-LATCH)	
IC533	8-759-239-23	IC TC74HC86AF (GATE)	
IC534	8-759-031-84	IC SC7S04F (INV)	
IC535	8-759-822-XX	IC L88MS05T-FA-TL (+5V REG)	
IC536	8-759-032-23	IC MC74HC74AF (ADVANCE SYNC GENERATOR)	
IC537	8-759-242-72	IC TC7W00F (ADVANCE SYNC GENERATOR)	
IC539	8-759-242-68	IC TC7W32F (GATE)	
IC540	8-759-007-80	IC MC74HC175F (SHIFT COUNTER)	
IC541	8-759-180-86	IC TC7W74F-TE12L (SHIFT COUNTER)	
IC542	8-759-926-97	IC SN74HC4024NS (SHIFT COUNTER)	
IC543	8-759-038-46	IC SC7S00F (INV)	
IC602	8-759-011-65	IC MC74HC4053F (SWITCH)	
IC603	8-759-032-14	IC MC74HC08AF (GATE)	
IC604	8-759-242-74	IC TC7W04F (INV)	
IC605	8-759-011-65	IC MC74HC4053F (SWITCH)	
IC606	8-759-242-68	IC TC7W32F (OR)	
IC607	8-759-908-92	IC TL084CNS (BUFFER)	
IC608	8-759-030-55	IC MC1496M (MOD)	
IC609	8-759-030-55	IC MC1496M (MOD)	
IC610	8-759-030-55	IC MC1496M (MOD)	
IC611	8-759-030-55	IC MC1496M (MOD)	
IC612	8-759-239-23	IC TC74HC86AF (GATE)	
IC613	8-759-011-65	IC MC74HC4053F (SWITCH)	
IC614	8-759-011-64	IC MC74HC4052F (SWITCH)	
IC615	8-759-603-56	IC M51272FP (NTSC/PAL ENCODER)	
IC616	8-759-011-65	IC MC74HC4053F (SWITCH)	
IC617	8-759-011-65	IC MC74HC4053F (SWITCH)	
IC618	8-759-011-65	IC MC74HC4053F (SWITCH)	
IC619	8-759-603-56	IC M51272FP (NTSC/PAL ENCODER)	
IC620	8-759-030-55	IC MC1496M (MOD)	
IC621	8-759-030-55	IC MC1496M (MOD)	
IC622	8-752-052-73	IC CXA1451M (75 DRIVER)	
IC623	8-752-052-73	IC CXA1451M (75 DRIVER)	
IC624	8-752-052-73	IC CXA1451M (75 DRIVER)	
IC625	8-752-052-73	IC CXA1451M (75 DRIVER)	
IC626	8-759-245-79	IC TA79005S (-5V REG)	
IC627	8-759-144-82	IC uPC2405HF (+5V REG)	
IC628	8-759-245-45	IC TA78L09F (+9V REG)	
IC629	8-759-242-78	IC TC7W02F (OR)	
IC701	8-759-822-XX	IC L88MS05T-FA-TL (+5V REG)	
IC703	8-759-937-56	IC S-8054ALB-LM-S (RESET)	
IC704	8-759-635-27	IC M62352GP (EVR D/A CONVERTER)	
IC705	8-759-635-27	IC M62352GP (EVR D/A CONVERTER)	
IC706	8-759-635-27	IC M62352GP (EVR D/A CONVERTER)	
IC707	8-759-635-27	IC M62352GP (EVR D/A CONVERTER)	
IC709	8-759-551-68	IC M6M80021FP (EEPROM)	
IC710	8-759-551-68	IC M6M80021FP (EEPROM)	
IC711	8-759-938-68	IC CXD1095Q (I/O EXPANDER)	
IC730	8-759-277-75	IC M37702E4A-GDX991-FP (MAIN MICROCOMPUTER)	

Ref. No.	Part No.	Description	Remarks
IC950	8-759-505-98	IC MB620461 (LUMI KEY/CHROMA KEY)	
IC951	8-759-907-81	IC SN74LS221NS (M.M)	
IC952	8-752-334-64	IC CXD1171M (D/A CONVERTER)	
IC954	8-752-334-64	IC CXD1171M (D/A CONVERTER)	
IC955	8-759-234-20	IC TC7S08F	

< COIL >

L001	1-410-382-31	INDUCTOR CHIP 12uH	
L002	1-410-382-31	INDUCTOR CHIP 12uH	
L005	1-410-387-11	INDUCTOR CHIP 33uH	
L006	1-410-387-11	INDUCTOR CHIP 33uH	
L008	1-410-387-11	INDUCTOR CHIP 33uH	
L010	1-410-387-11	INDUCTOR CHIP 33uH	
L101	1-410-386-11	INDUCTOR CHIP 27uH	
L102	1-410-387-11	INDUCTOR CHIP 33uH	
L103	1-410-384-31	INDUCTOR CHIP 18uH	
L201	1-410-389-31	INDUCTOR CHIP 47uH	
L202	1-410-393-11	INDUCTOR CHIP 100uH	
L203	1-410-393-11	INDUCTOR CHIP 100uH	
L204	1-410-386-11	INDUCTOR CHIP 27uH	
L205	1-410-387-11	INDUCTOR CHIP 33uH	
L206	1-410-384-31	INDUCTOR CHIP 18uH	
L207	1-410-658-31	INDUCTOR CHIP 220uH	
L208	1-410-658-31	INDUCTOR CHIP 220uH	
L209	1-410-386-11	INDUCTOR CHIP 27uH	
L210	1-410-386-11	INDUCTOR CHIP 27uH	
L211	1-410-383-31	INDUCTOR CHIP 15uH	
L501	1-410-658-31	INDUCTOR CHIP 220uH	
L502	1-410-658-31	INDUCTOR CHIP 220uH	
L503	1-410-384-31	INDUCTOR CHIP 18uH	
L504	1-410-392-11	INDUCTOR CHIP 82uH	
L601	1-410-658-31	INDUCTOR CHIP 220uH	
L602	1-410-658-31	INDUCTOR CHIP 220uH	
L603	1-410-658-31	INDUCTOR CHIP 220uH	
L604	1-410-658-31	INDUCTOR CHIP 220uH	
L605	1-410-658-31	INDUCTOR CHIP 220uH	
L606	1-410-658-31	INDUCTOR CHIP 220uH	
L607	1-410-658-31	INDUCTOR CHIP 220uH	
L608	1-410-658-31	INDUCTOR CHIP 220uH	
L609	1-410-389-31	INDUCTOR CHIP 47uH	
L610	1-410-386-11	INDUCTOR CHIP 27uH	
L611	1-410-387-11	INDUCTOR CHIP 33uH	
L612	1-410-384-31	INDUCTOR CHIP 18uH	
L613	1-412-033-11	INDUCTOR CHIP 220uH	
L614	1-412-033-11	INDUCTOR CHIP 220uH	
L615	1-412-033-11	INDUCTOR CHIP 220uH	
L616	1-412-033-11	INDUCTOR CHIP 220uH	
L617	1-410-393-11	INDUCTOR CHIP 100uH	
L618	1-410-393-11	INDUCTOR CHIP 100uH	
L619	1-410-658-31	INDUCTOR CHIP 220uH	
L620	1-410-658-31	INDUCTOR CHIP 220uH	
L621	1-410-658-31	INDUCTOR CHIP 220uH	

Ref. No.	Part No.	Description	Remarks
L622	1-410-658-31	INDUCTOR CHIP 220uH	
L623	1-410-386-11	INDUCTOR CHIP 27uH	
L624	1-410-387-11	INDUCTOR CHIP 33uH	
L625	1-410-384-31	INDUCTOR CHIP 18uH	
L626	1-410-658-31	INDUCTOR CHIP 220uH	
L627	1-410-658-31	INDUCTOR CHIP 220uH	
		< TRANSISTOR >	
Q001	8-729-216-22	TRANSISTOR 2SA1162-G	
Q002	8-729-216-22	TRANSISTOR 2SA1162-G	
Q003	8-729-216-22	TRANSISTOR 2SA1162-G	
Q004	8-729-216-22	TRANSISTOR 2SA1162-G	
Q005	8-729-901-01	TRANSISTOR DTC144EK	
Q006	8-729-901-01	TRANSISTOR DTC144EK	
Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q103	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q104	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q106	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q107	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q108	8-729-216-22	TRANSISTOR 2SA1162-G	
Q109	8-729-216-22	TRANSISTOR 2SA1162-G	
Q110	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q111	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q112	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q113	8-729-216-22	TRANSISTOR 2SA1162-G	
Q114	8-729-216-22	TRANSISTOR 2SA1162-G	
Q115	8-729-216-22	TRANSISTOR 2SA1162-G	
Q116	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q117	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q118	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q119	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q120	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q121	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q122	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q123	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q124	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q125	8-729-216-22	TRANSISTOR 2SA1162-G	
Q126	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q127	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q128	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q129	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q130	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q131	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q201	8-729-216-22	TRANSISTOR 2SA1162-G	
Q202	8-729-216-22	TRANSISTOR 2SA1162-G	
Q203	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

Ref. No.	Part No.	Description	Remarks
Q204	8-729-216-22	TRANSISTOR 2SA1162-G	
Q205	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q206	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q207	8-729-216-22	TRANSISTOR 2SA1162-G	
Q208	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q209	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q210	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q211	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q212	8-729-216-22	TRANSISTOR 2SA1162-G	
Q213	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q214	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q215	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q216	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q217	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q218	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q219	8-729-216-22	TRANSISTOR 2SA1162-G	
Q301	8-729-140-47	TRANSISTOR 2SC3735-L-B35	
Q302	8-729-019-10	TRANSISTOR 2SA1464-Y12Y13Y14	
Q303	8-729-140-47	TRANSISTOR 2SC3735-L-B35	
Q304	8-729-019-10	TRANSISTOR 2SA1464-Y12Y13Y14	
Q305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q306	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q307	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q309	8-729-216-22	TRANSISTOR 2SA1162-G	
Q310	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q403	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q404	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q405	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q406	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q407	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q408	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q409	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q410	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q411	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q412	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q413	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q414	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q415	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q416	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q417	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q418	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q501	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q601	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q602	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q603	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

DV-19

Ref. No.	Part No.	Description		Remarks
Q604	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q605	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q606	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q607	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q608	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q609	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q610	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q611	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q612	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q613	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q614	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q615	8-729-216-22	TRANSISTOR	2SA1162-G	
Q616	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q617	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q618	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q619	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q620	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q621	8-729-216-22	TRANSISTOR	2SA1162-G	
Q622	8-729-216-22	TRANSISTOR	2SA1162-G	
Q623	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q624	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q625	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q626	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q627	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q628	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q629	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q630	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q631	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q632	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q633	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q634	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q635	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q636	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q637	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q638	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q639	8-729-216-22	TRANSISTOR	2SA1162-G	
Q640	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q641	8-729-216-22	TRANSISTOR	2SA1162-G	
Q642	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q701	8-729-901-01	TRANSISTOR	DTC144EK	
Q702	8-729-901-01	TRANSISTOR	DTC144EK	
Q703	8-729-901-01	TRANSISTOR	DTC144EK	
Q950	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q951	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q952	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q953	8-729-120-28	TRANSISTOR	2SC1623-L5L6	

Ref. No.	Part No.	Description				Remarks
		< RESISTOR >				
R001	1-216-805-11	METAL CHIP	47	5%	1/16W	
R002	1-216-805-11	METAL CHIP	47	5%	1/16W	
R003	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R004	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R005	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	
R006	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	
R007	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	
R008	1-218-676-11	METAL CHIP	220	0.50%	1/16W	
R009	1-218-705-11	METAL CHIP	3.6K	0.50%	1/16W	
R010	1-218-705-11	METAL CHIP	3.6K	0.50%	1/16W	
R011	1-218-676-11	METAL CHIP	220	0.50%	1/16W	
R012	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	
R013	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	
R014	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	
R015	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	
R016	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	
R017	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	
R018	1-218-676-11	METAL CHIP	220	0.50%	1/16W	
R019	1-218-705-11	METAL CHIP	3.6K	0.50%	1/16W	
R020	1-218-705-11	METAL CHIP	3.6K	0.50%	1/16W	
R021	1-218-676-11	METAL CHIP	220	0.50%	1/16W	
R022	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	
R023	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	
R024	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	
R025	1-216-817-11	METAL CHIP	470	5%	1/16W	
R026	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R027	1-216-817-11	METAL CHIP	470	5%	1/16W	
R028	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R029	1-216-817-11	METAL CHIP	470	5%	1/16W	
R030	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R031	1-216-817-11	METAL CHIP	470	5%	1/16W	
R032	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R033	1-216-838-11	METAL CHIP	27K	5%	1/16W	
R034	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R035	1-216-838-11	METAL CHIP	27K	5%	1/16W	
R036	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R037	1-216-864-11	METAL CHIP	0	5%	1/16W	
R038	1-216-864-11	METAL CHIP	0	5%	1/16W	
R051	1-218-692-11	METAL CHIP	1K	0.50%	1/16W	
R052	1-218-692-11	METAL CHIP	1K	0.50%	1/16W	
R081	1-216-817-11	METAL CHIP	470	5%	1/16W	
R082	1-216-817-11	METAL CHIP	470	5%	1/16W	
R083	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R084	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R085	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R086	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R087	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R088	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R089	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	
R090	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	

Ref. No.	Part No.	Description			Remarks
R091	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R092	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R093	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R094	1-218-836-11	METAL CHIP	360	0.50%	1/16W
R095	1-216-817-11	METAL CHIP	470	5%	1/16W
R096	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R097	1-218-836-11	METAL CHIP	360	0.50%	1/16W
R098	1-216-817-11	METAL CHIP	470	5%	1/16W
R099	1-216-815-11	METAL CHIP	330	5%	1/16W
R100	1-216-815-11	METAL CHIP	330	5%	1/16W
R101	1-216-815-11	METAL CHIP	330	5%	1/16W
R102	1-216-821-11	METAL CHIP	1K	5%	1/16W
R103	1-216-817-11	METAL CHIP	470	5%	1/16W
R104	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R105	1-216-817-11	METAL CHIP	470	5%	1/16W
R106	1-216-821-11	METAL CHIP	1K	5%	1/16W
R107	1-216-817-11	METAL CHIP	470	5%	1/16W
R108	1-216-817-11	METAL CHIP	470	5%	1/16W
R109	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R110	1-216-821-11	METAL CHIP	1K	5%	1/16W
R111	1-218-722-11	METAL CHIP	18K	0.50%	1/16W
R112	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R113	1-218-866-11	METAL CHIP	6.2K	0.50%	1/16W
R114	1-216-833-11	METAL CHIP	10K	5%	1/16W
R115	1-216-833-11	METAL CHIP	10K	5%	1/16W
R116	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R117	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R118	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R119	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R120	1-218-836-11	METAL CHIP	360	0.50%	1/16W
R121	1-216-817-11	METAL CHIP	470	5%	1/16W
R122	1-218-836-11	METAL CHIP	360	0.50%	1/16W
R123	1-216-817-11	METAL CHIP	470	5%	1/16W
R124	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R125	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R126	1-216-817-11	METAL CHIP	470	5%	1/16W
R127	1-216-817-11	METAL CHIP	470	5%	1/16W
R128	1-216-817-11	METAL CHIP	470	5%	1/16W
R129	1-216-817-11	METAL CHIP	470	5%	1/16W
R130	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R131	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R132	1-216-833-11	METAL CHIP	10K	5%	1/16W
R133	1-216-817-11	METAL CHIP	470	5%	1/16W
R134	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R135	1-218-866-11	METAL CHIP	6.2K	0.50%	1/16W
R136	1-218-722-11	METAL CHIP	18K	0.50%	1/16W
R137	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R138	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R139	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R140	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R141	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R142	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R143	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R144	1-216-809-11	METAL CHIP	100	5%	1/16W
R145	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R146	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R147	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R148	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R149	1-216-809-11	METAL CHIP	100	5%	1/16W
R150	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R151	1-218-670-11	METAL CHIP	120	0.50%	1/16W
R152	1-216-817-11	METAL CHIP	470	5%	1/16W
R153	1-216-857-11	METAL CHIP	1M	5%	1/16W
R154	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R155	1-216-835-11	METAL CHIP	15K	5%	1/16W
R156	1-216-821-11	METAL CHIP	1K	5%	1/16W
R157	1-216-821-11	METAL CHIP	1K	5%	1/16W
R158	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R159	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R160	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R161	1-216-817-11	METAL CHIP	470	5%	1/16W
R162	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R163	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R164	1-216-821-11	METAL CHIP	1K	5%	1/16W
R165	1-216-864-11	METAL CHIP	0	5%	1/16W
R166	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R167	1-218-867-11	METAL CHIP	6.8K	0.50%	1/16W
R168	1-216-839-11	METAL CHIP	33K	5%	1/16W
R169	1-216-821-11	METAL CHIP	1K	5%	1/16W
R170	1-216-821-11	METAL CHIP	1K	5%	1/16W
R171	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R172	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R173	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R174	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R175	1-216-817-11	METAL CHIP	470	5%	1/16W
R176	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R177	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R178	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R179	1-216-835-11	METAL CHIP	15K	5%	1/16W
R180	1-216-817-11	METAL CHIP	470	5%	1/16W
R181	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R182	1-216-817-11	METAL CHIP	470	5%	1/16W
R183	1-216-821-11	METAL CHIP	1K	5%	1/16W
R184	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R185	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R186	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R187	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R188	1-218-706-11	METAL CHIP	3.9K	5%	1/16W
R189	1-216-835-11	METAL CHIP	15K	5%	1/16W
R190	1-216-830-11	METAL CHIP	5.6K	5%	1/16W

DV-19

Ref. No.	Part No.	Description			Remarks
R191	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R192	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R193	1-216-817-11	METAL CHIP	470	5%	1/16W
R194	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R195	1-216-817-11	METAL CHIP	470	5%	1/16W
R196	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R201	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R202	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R203	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R204	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R205	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R206	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W
R207	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R208	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R209	1-216-817-11	METAL CHIP	470	5%	1/16W
R210	1-216-817-11	METAL CHIP	470	5%	1/16W
R211	1-216-809-11	METAL CHIP	100	5%	1/16W
R212	1-216-817-11	METAL CHIP	470	5%	1/16W
R213	1-216-817-11	METAL CHIP	470	5%	1/16W
R214	1-216-818-11	METAL CHIP	560	5%	1/16W
R215	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R216	1-216-817-11	METAL CHIP	470	5%	1/16W
R217	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R218	1-216-821-11	METAL CHIP	1K	5%	1/16W
R219	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R220	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R221	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R222	1-216-816-11	METAL CHIP	390	5%	1/16W
R223	1-216-821-11	METAL CHIP	1K	5%	1/16W
R224	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R225	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R226	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R227	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R228	1-216-833-11	METAL CHIP	10K	5%	1/16W
R229	1-216-833-11	METAL CHIP	10K	5%	1/16W
R230	1-216-839-11	METAL CHIP	33K	5%	1/16W
R231	1-216-849-11	METAL CHIP	220K	5%	1/16W
R232	1-216-841-11	METAL CHIP	47K	5%	1/16W
R233	1-216-846-11	METAL CHIP	120K	5%	1/16W
R234	1-216-833-11	METAL CHIP	10K	5%	1/16W
R235	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R236	1-216-833-11	METAL CHIP	10K	5%	1/16W
R237	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R238	1-216-833-11	METAL CHIP	10K	5%	1/16W
R239	1-216-817-11	METAL CHIP	470	5%	1/16W
R240	1-216-849-11	METAL CHIP	220K	5%	1/16W
R241	1-216-821-11	METAL CHIP	1K	5%	1/16W
R242	1-216-818-11	METAL CHIP	560	5%	1/16W
R243	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R244	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R245	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R246	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R249	1-216-817-11	METAL CHIP	470	5%	1/16W
R250	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R251	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R252	1-216-814-11	METAL CHIP	270	5%	1/16W
R253	1-218-833-11	METAL CHIP	270	0.50%	1/16W
R255	1-216-821-11	METAL CHIP	1K	5%	1/16W
R256	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R258	1-216-821-11	METAL CHIP	1K	5%	1/16W
R259	1-216-821-11	METAL CHIP	1K	5%	1/16W
R260	1-216-817-11	METAL CHIP	470	5%	1/16W
R261	1-216-821-11	METAL CHIP	1K	5%	1/16W
R262	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R263	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R264	1-216-817-11	METAL CHIP	470	5%	1/16W
R265	1-216-816-11	METAL CHIP	390	5%	1/16W
R266	1-216-821-11	METAL CHIP	1K	5%	1/16W
R267	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R268	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R269	1-216-817-11	METAL CHIP	470	5%	1/16W
R270	1-216-864-11	METAL CHIP	0	5%	1/16W
R272	1-216-821-11	METAL CHIP	1K	5%	1/16W
R273	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R274	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R275	1-216-817-11	METAL CHIP	470	5%	1/16W
R276	1-216-821-11	METAL CHIP	1K	5%	1/16W
R277	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R278	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R279	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R280	1-216-817-11	METAL CHIP	470	5%	1/16W
R281	1-216-821-11	METAL CHIP	1K	5%	1/16W
R282	1-216-864-11	METAL CHIP	0	5%	1/16W
R283	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R284	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R285	1-216-849-11	METAL CHIP	220K	5%	1/16W
R286	1-216-849-11	METAL CHIP	220K	5%	1/16W
R301	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R302	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R303	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R304	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R305	1-216-816-11	METAL CHIP	390	5%	1/16W
R306	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R307	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R308	1-216-816-11	METAL CHIP	390	5%	1/16W
R309	1-216-813-11	METAL CHIP	220	5%	1/16W
R310	1-216-813-11	METAL CHIP	220	5%	1/16W
R311	1-216-813-11	METAL CHIP	220	5%	1/16W
R312	1-216-813-11	METAL CHIP	220	5%	1/16W
R313	1-216-827-11	METAL CHIP	3.3K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R314	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R315	1-216-805-11	METAL CHIP	47	5%	1/16W
R316	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R317	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R318	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R319	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R320	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R321	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R322	1-216-805-11	METAL CHIP	47	5%	1/16W
R323	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R324	1-218-848-11	METAL CHIP	1.1K	0.50%	1/16W
R325	1-218-848-11	METAL CHIP	1.1K	0.50%	1/16W
R326	1-218-848-11	METAL CHIP	1.1K	0.50%	1/16W
R327	1-216-813-11	METAL CHIP	220	5%	1/16W
R328	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R329	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R330	1-216-805-11	METAL CHIP	47	5%	1/16W
R331	1-216-864-11	METAL CHIP	0	5%	1/16W
R332	1-216-864-11	METAL CHIP	0	5%	1/16W
R333	1-216-864-11	METAL CHIP	0	5%	1/16W
R334	1-216-864-11	METAL CHIP	0	5%	1/16W
R335	1-216-864-11	METAL CHIP	0	5%	1/16W
R336	1-216-864-11	METAL CHIP	0	5%	1/16W
R337	1-216-864-11	METAL CHIP	0	5%	1/16W
R338	1-216-864-11	METAL CHIP	0	5%	1/16W
R401	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R402	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R403	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R404	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R405	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R406	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R407	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R408	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R409	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R410	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R411	1-216-817-11	METAL CHIP	470	5%	1/16W
R412	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R413	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R414	1-216-821-11	METAL CHIP	1K	5%	1/16W
R415	1-216-821-11	METAL CHIP	1K	5%	1/16W
R416	1-216-821-11	METAL CHIP	1K	5%	1/16W
R417	1-216-821-11	METAL CHIP	1K	5%	1/16W
R418	1-216-821-11	METAL CHIP	1K	5%	1/16W
R419	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R420	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R421	1-216-833-11	METAL CHIP	10K	5%	1/16W
R422	1-216-833-11	METAL CHIP	10K	5%	1/16W
R423	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R424	1-216-833-11	METAL CHIP	10K	5%	1/16W
R425	1-218-840-11	METAL CHIP	510	0.50%	1/16W

Ref. No.	Part No.	Description			Remarks
R426	1-216-817-11	METAL CHIP	470	5%	1/16W
R427	1-216-817-11	METAL CHIP	470	5%	1/16W
R428	1-216-817-11	METAL CHIP	470	5%	1/16W
R429	1-216-821-11	METAL CHIP	1K	5%	1/16W
R430	1-216-821-11	METAL CHIP	1K	5%	1/16W
R431	1-216-821-11	METAL CHIP	1K	5%	1/16W
R432	1-216-821-11	METAL CHIP	1K	5%	1/16W
R433	1-216-817-11	METAL CHIP	470	5%	1/16W
R434	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R435	1-216-833-11	METAL CHIP	10K	5%	1/16W
R436	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R437	1-216-833-11	METAL CHIP	10K	5%	1/16W
R438	1-216-817-11	METAL CHIP	470	5%	1/16W
R439	1-216-821-11	METAL CHIP	1K	5%	1/16W
R440	1-216-821-11	METAL CHIP	1K	5%	1/16W
R443	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R444	1-216-833-11	METAL CHIP	10K	5%	1/16W
R445	1-216-817-11	METAL CHIP	470	5%	1/16W
R446	1-216-821-11	METAL CHIP	1K	5%	1/16W
R451	1-218-720-11	METAL CHIP	15K	0.50%	1/16W
R452	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R453	1-216-839-11	METAL CHIP	33K	5%	1/16W
R454	1-216-839-11	METAL CHIP	33K	5%	1/16W
R455	1-216-839-11	METAL CHIP	33K	5%	1/16W
R456	1-216-839-11	METAL CHIP	33K	5%	1/16W
R457	1-216-839-11	METAL CHIP	33K	5%	1/16W
R458	1-216-833-11	METAL CHIP	10K	5%	1/16W
R459	1-216-821-11	METAL CHIP	1K	5%	1/16W
R460	1-216-809-11	METAL CHIP	100	5%	1/16W
R461	1-216-857-11	METAL CHIP	1M	5%	1/16W
R462	1-216-857-11	METAL CHIP	1M	5%	1/16W
R463	1-216-857-11	METAL CHIP	1M	5%	1/16W
R465	1-216-864-11	METAL CHIP	0	5%	1/16W
R467	1-216-864-11	METAL CHIP	0	5%	1/16W
R471	1-216-833-11	METAL CHIP	10K	5%	1/16W
R472	1-216-833-11	METAL CHIP	10K	5%	1/16W
R473	1-216-864-11	METAL CHIP	0	5%	1/16W
R474	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R475	1-216-809-11	METAL CHIP	100	5%	1/16W
R476	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R477	1-216-809-11	METAL CHIP	100	5%	1/16W
R478	1-216-833-11	METAL CHIP	10K	5%	1/16W
R479	1-216-864-11	METAL CHIP	0	5%	1/16W
R481	1-216-821-11	METAL CHIP	1K	5%	1/16W
R482	1-216-817-11	METAL CHIP	470	5%	1/16W
R484	1-216-841-11	METAL CHIP	47K	5%	1/16W
R486	1-216-864-11	METAL CHIP	0	5%	1/16W
R487	1-216-864-11	METAL CHIP	0	5%	1/16W
R488	1-218-720-11	METAL CHIP	15K	0.50%	1/16W
R491	1-216-841-11	METAL CHIP	47K	5%	1/16W

DV-19

Ref. No.	Part No.	Description			Remarks
R492	1-216-841-11	METAL CHIP	47K	5%	1/16W
R493	1-216-841-11	METAL CHIP	47K	5%	1/16W
R497	1-216-864-11	METAL CHIP	0	5%	1/16W
R499	1-216-864-11	METAL CHIP	0	5%	1/16W
R501	1-216-839-11	METAL CHIP	33K	5%	1/16W
R502	1-216-833-11	METAL CHIP	10K	5%	1/16W
R503	1-216-833-11	METAL CHIP	10K	5%	1/16W
R504	1-216-839-11	METAL CHIP	33K	5%	1/16W
R505	1-216-821-11	METAL CHIP	1K	5%	1/16W
R506	1-216-839-11	METAL CHIP	33K	5%	1/16W
R507	1-216-857-11	METAL CHIP	1M	5%	1/16W
R508	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R509	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R510	1-216-839-11	METAL CHIP	33K	5%	1/16W
R511	1-216-839-11	METAL CHIP	33K	5%	1/16W
R512	1-216-821-11	METAL CHIP	1K	5%	1/16W
R513	1-216-821-11	METAL CHIP	1K	5%	1/16W
R514	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R515	1-216-809-11	METAL CHIP	100	5%	1/16W
R516	1-216-809-11	METAL CHIP	100	5%	1/16W
R517	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R518	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R519	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R520	1-216-864-11	METAL CHIP	0	5%	1/16W
R521	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R522	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R523	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R525	1-216-864-11	METAL CHIP	0	5%	1/16W
R527	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R528	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R529	1-216-821-11	METAL CHIP	1K	5%	1/16W
R530	1-216-821-11	METAL CHIP	1K	5%	1/16W
R531	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R532	1-216-839-11	METAL CHIP	33K	5%	1/16W
R533	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R534	1-216-833-11	METAL CHIP	10K	5%	1/16W
R535	1-216-833-11	METAL CHIP	10K	5%	1/16W
R536	1-216-821-11	METAL CHIP	1K	5%	1/16W
R537	1-216-821-11	METAL CHIP	1K	5%	1/16W
R538	1-216-833-11	METAL CHIP	10K	5%	1/16W
R539	1-216-833-11	METAL CHIP	10K	5%	1/16W
R540	1-216-839-11	METAL CHIP	33K	5%	1/16W
R541	1-216-839-11	METAL CHIP	33K	5%	1/16W
R542	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R543	1-216-864-11	METAL CHIP	0	5%	1/16W
R545	1-216-864-11	METAL CHIP	0	5%	1/16W
R547	1-216-864-11	METAL CHIP	0	5%	1/16W
R549	1-216-864-11	METAL CHIP	0	5%	1/16W
R551	1-216-864-11	METAL CHIP	0	5%	1/16W
R553	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R554	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R555	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R556	1-216-821-11	METAL CHIP	1K	5%	1/16W
R557	1-216-833-11	METAL CHIP	10K	5%	1/16W
R558	1-216-833-11	METAL CHIP	10K	5%	1/16W
R559	1-216-809-11	METAL CHIP	100	5%	1/16W
R560	1-216-809-11	METAL CHIP	100	5%	1/16W
R561	1-216-833-11	METAL CHIP	10K	5%	1/16W
R562	1-216-833-11	METAL CHIP	10K	5%	1/16W
R563	1-216-833-11	METAL CHIP	10K	5%	1/16W
R564	1-216-833-11	METAL CHIP	10K	5%	1/16W
R565	1-216-833-11	METAL CHIP	10K	5%	1/16W
R566	1-216-833-11	METAL CHIP	10K	5%	1/16W
R567	1-216-833-11	METAL CHIP	10K	5%	1/16W
R568	1-216-833-11	METAL CHIP	10K	5%	1/16W
R570	1-216-838-11	METAL CHIP	27K	5%	1/16W
R571	1-216-833-11	METAL CHIP	10K	5%	1/16W
R572	1-216-833-11	METAL CHIP	10K	5%	1/16W
R573	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R574	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R575	1-216-833-11	METAL CHIP	10K	5%	1/16W
R576	1-216-864-11	METAL CHIP	0	5%	1/16W
R578	1-216-809-11	METAL CHIP	100	5%	1/16W
R580	1-216-809-11	METAL CHIP	100	5%	1/16W
R581	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R582	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R583	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R584	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R585	1-216-833-11	METAL CHIP	10K	5%	1/16W
R586	1-216-833-11	METAL CHIP	10K	5%	1/16W
R587	1-216-833-11	METAL CHIP	10K	5%	1/16W
R588	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R589	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R590	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R591	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R592	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R593	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R594	1-216-833-11	METAL CHIP	10K	5%	1/16W
R595	1-216-833-11	METAL CHIP	10K	5%	1/16W
R596	1-216-837-11	METAL CHIP	22K	5%	1/16W
R597	1-216-821-11	METAL CHIP	1K	5%	1/16W
R598	1-216-837-11	METAL CHIP	22K	5%	1/16W
R599	1-216-821-11	METAL CHIP	1K	5%	1/16W
R600	1-216-835-11	METAL CHIP	15K	5%	1/16W
R601	1-216-817-11	METAL CHIP	470	5%	1/16W
R602	1-216-817-11	METAL CHIP	470	5%	1/16W
R603	1-216-833-11	METAL CHIP	10K	5%	1/16W
R605	1-216-821-11	METAL CHIP	1K	5%	1/16W
R606	1-216-821-11	METAL CHIP	1K	5%	1/16W
R607	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R608	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R610	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R611	1-216-833-11	METAL CHIP	10K	5%	1/16W
R612	1-216-833-11	METAL CHIP	10K	5%	1/16W
R613	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R614	1-216-817-11	METAL CHIP	470	5%	1/16W
R615	1-216-817-11	METAL CHIP	470	5%	1/16W
R616	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R617	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R618	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R619	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R620	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R621	1-216-841-11	METAL CHIP	47K	5%	1/16W
R622	1-216-841-11	METAL CHIP	47K	5%	1/16W
R623	1-216-845-11	METAL CHIP	100K	5%	1/16W
R624	1-216-845-11	METAL CHIP	100K	5%	1/16W
R625	1-216-817-11	METAL CHIP	470	5%	1/16W
R626	1-216-817-11	METAL CHIP	470	5%	1/16W
R627	1-216-821-11	METAL CHIP	1K	5%	1/16W
R628	1-216-821-11	METAL CHIP	1K	5%	1/16W
R629	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R630	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R631	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R632	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R633	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R634	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R635	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R636	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R637	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R638	1-216-821-11	METAL CHIP	1K	5%	1/16W
R639	1-216-833-11	METAL CHIP	10K	5%	1/16W
R640	1-216-821-11	METAL CHIP	1K	5%	1/16W
R641	1-216-833-11	METAL CHIP	10K	5%	1/16W
R642	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R643	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R644	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R645	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R646	1-216-817-11	METAL CHIP	470	5%	1/16W
R647	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R648	1-216-817-11	METAL CHIP	470	5%	1/16W
R649	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R650	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R651	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R652	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R653	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R654	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R655	1-218-840-11	METAL CHIP	510	0.50%	1/16W
R656	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R657	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R658	1-216-833-11	METAL CHIP	10K	5%	1/16W
R659	1-216-833-11	METAL CHIP	10K	5%	1/16W
R660	1-218-845-11	METAL CHIP	820	0.50%	1/16W

Ref. No.	Part No.	Description			Remarks
R661	1-216-817-11	METAL CHIP	470	5%	1/16W
R662	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R663	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R664	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R665	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R666	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R667	1-216-817-11	METAL CHIP	470	5%	1/16W
R668	1-216-817-11	METAL CHIP	470	5%	1/16W
R669	1-216-817-11	METAL CHIP	470	5%	1/16W
R670	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R671	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R672	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R673	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R674	1-216-849-11	METAL CHIP	220K	5%	1/16W
R675	1-216-849-11	METAL CHIP	220K	5%	1/16W
R676	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R677	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R678	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R679	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R680	1-216-817-11	METAL CHIP	470	5%	1/16W
R681	1-216-817-11	METAL CHIP	470	5%	1/16W
R682	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R683	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R684	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R685	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R686	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R687	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R688	1-216-817-11	METAL CHIP	470	5%	1/16W
R689	1-216-849-11	METAL CHIP	220K	5%	1/16W
R690	1-216-817-11	METAL CHIP	470	5%	1/16W
R691	1-216-849-11	METAL CHIP	220K	5%	1/16W
R692	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R693	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R694	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R695	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R696	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R697	1-216-821-11	METAL CHIP	1K	5%	1/16W
R698	1-216-821-11	METAL CHIP	1K	5%	1/16W
R699	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R701	1-216-833-11	METAL CHIP	10K	5%	1/16W
R702	1-216-841-11	METAL CHIP	47K	5%	1/16W
R703	1-216-841-11	METAL CHIP	47K	5%	1/16W
R704	1-216-841-11	METAL CHIP	47K	5%	1/16W
R705	1-216-841-11	METAL CHIP	47K	5%	1/16W
R706	1-216-841-11	METAL CHIP	47K	5%	1/16W
R707	1-216-841-11	METAL CHIP	47K	5%	1/16W
R708	1-216-841-11	METAL CHIP	47K	5%	1/16W
R709	1-216-841-11	METAL CHIP	47K	5%	1/16W
R710	1-216-841-11	METAL CHIP	47K	5%	1/16W
R711	1-216-841-11	METAL CHIP	47K	5%	1/16W

DV-19

Ref. No.	Part No.	Description			Remarks
R712	1-216-841-11	METAL CHIP	47K	5%	1/16W
R713	1-216-833-11	METAL CHIP	10K	5%	1/16W
R714	1-216-833-11	METAL CHIP	10K	5%	1/16W
R715	1-216-833-11	METAL CHIP	10K	5%	1/16W
R716	1-216-841-11	METAL CHIP	47K	5%	1/16W
R717	1-216-864-11	METAL CHIP	0	5%	1/16W
R725	1-216-833-11	METAL CHIP	10K	5%	1/16W
R726	1-216-833-11	METAL CHIP	10K	5%	1/16W
R732	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R733	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R735	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R736	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R737	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R739	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R740	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R741	1-216-833-11	METAL CHIP	10K	5%	1/16W
R743	1-216-841-11	METAL CHIP	47K	5%	1/16W
R751	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R752	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R753	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R754	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R755	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R756	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R757	1-216-864-11	METAL CHIP	0	5%	1/16W
R762	1-216-833-11	METAL CHIP	10K	5%	1/16W
R763	1-216-833-11	METAL CHIP	10K	5%	1/16W
R768	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R769	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R801	1-216-821-11	METAL CHIP	1K	5%	1/16W
R802	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R803	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R804	1-216-821-11	METAL CHIP	1K	5%	1/16W
R805	1-216-821-11	METAL CHIP	1K	5%	1/16W
R806	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R807	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R808	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R809	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R810	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R811	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R812	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R813	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R814	1-216-817-11	METAL CHIP	470	5%	1/16W
R815	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R816	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R817	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R818	1-216-821-11	METAL CHIP	1K	5%	1/16W
R819	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R820	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R821	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R822	1-218-692-11	METAL CHIP	1K	0.50%	1/16W

Ref. No.	Part No.	Description			Remarks
R823	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R824	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R825	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R826	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R827	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R828	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R829	1-216-821-11	METAL CHIP	1K	5%	1/16W
R830	1-216-821-11	METAL CHIP	1K	5%	1/16W
R831	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R832	1-216-817-11	METAL CHIP	470	5%	1/16W
R833	1-216-817-11	METAL CHIP	470	5%	1/16W
R834	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R835	1-216-817-11	METAL CHIP	470	5%	1/16W
R836	1-216-817-11	METAL CHIP	470	5%	1/16W
R837	1-216-833-11	METAL CHIP	10K	5%	1/16W
R838	1-216-817-11	METAL CHIP	470	5%	1/16W
R839	1-216-821-11	METAL CHIP	1K	5%	1/16W
R840	1-216-821-11	METAL CHIP	1K	5%	1/16W
R841	1-216-817-11	METAL CHIP	470	5%	1/16W
R842	1-216-821-11	METAL CHIP	1K	5%	1/16W
R843	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R844	1-216-849-11	METAL CHIP	220K	5%	1/16W
R845	1-216-841-11	METAL CHIP	47K	5%	1/16W
R846	1-216-817-11	METAL CHIP	470	5%	1/16W
R847	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R848	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R849	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R850	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R851	1-216-833-11	METAL CHIP	10K	5%	1/16W
R852	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R853	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R854	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R855	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R856	1-216-821-11	METAL CHIP	1K	5%	1/16W
R857	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R858	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R859	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R860	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R861	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R862	1-216-817-11	METAL CHIP	470	5%	1/16W
R863	1-216-833-11	METAL CHIP	10K	5%	1/16W
R864	1-216-821-11	METAL CHIP	1K	5%	1/16W
R865	1-216-821-11	METAL CHIP	1K	5%	1/16W
R866	1-216-864-11	METAL CHIP	0	5%	1/16W
R867	1-216-819-11	METAL CHIP	680	5%	1/16W
R868	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R869	1-216-833-11	METAL CHIP	10K	5%	1/16W
R870	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R871	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R872	1-218-692-11	METAL CHIP	1K	0.50%	1/16W

Ref. No.	Part No.	Description			Remarks
R873	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R874	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R875	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R876	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R877	1-216-817-11	METAL CHIP	470	5%	1/16W
R878	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R879	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R880	1-216-817-11	METAL CHIP	470	5%	1/16W
R881	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R882	1-216-817-11	METAL CHIP	470	5%	1/16W
R883	1-216-821-11	METAL CHIP	1K	5%	1/16W
R884	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R885	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R886	1-216-819-11	METAL CHIP	680	5%	1/16W
R887	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R888	1-216-821-11	METAL CHIP	1K	5%	1/16W
R889	1-216-821-11	METAL CHIP	1K	5%	1/16W
R890	1-216-816-11	METAL CHIP	390	5%	1/16W
R891	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R892	1-216-833-11	METAL CHIP	10K	5%	1/16W
R893	1-216-817-11	METAL CHIP	470	5%	1/16W
R894	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R895	1-216-817-11	METAL CHIP	470	5%	1/16W
R896	1-216-821-11	METAL CHIP	1K	5%	1/16W
R897	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R898	1-216-817-11	METAL CHIP	470	5%	1/16W
R899	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R901	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R902	1-216-817-11	METAL CHIP	470	5%	1/16W
R903	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R904	1-216-803-11	METAL CHIP	33	5%	1/16W
R905	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R906	1-216-816-11	METAL CHIP	390	5%	1/16W
R907	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R908	1-218-845-11	METAL CHIP	820	0.50%	1/16W
R909	1-216-817-11	METAL CHIP	470	5%	1/16W
R910	1-216-821-11	METAL CHIP	1K	5%	1/16W
R911	1-216-821-11	METAL CHIP	1K	5%	1/16W
R912	1-216-821-11	METAL CHIP	1K	5%	1/16W
R913	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R914	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R915	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R916	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R917	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R918	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R919	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R920	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R921	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R922	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R923	1-218-672-11	METAL CHIP	150	0.50%	1/16W

Ref. No.	Part No.	Description			Remarks
R924	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R925	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R926	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R927	1-216-821-11	METAL CHIP	1K	5%	1/16W
R928	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R929	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R930	1-216-809-11	METAL CHIP	100	5%	1/16W
R931	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R932	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R933	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R934	1-216-809-11	METAL CHIP	100	5%	1/16W
R935	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R936	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R938	1-216-864-11	METAL CHIP	0	5%	1/16W
R939	1-216-864-11	METAL CHIP	0	5%	1/16W
R941	1-216-864-11	METAL CHIP	0	5%	1/16W
R942	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R943	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R944	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R950	1-218-717-11	METAL CHIP	11K		1/16W
R951	1-216-839-11	METAL CHIP	33K		1/16W
R954	1-216-833-11	METAL CHIP	10K	5%	1/16W
R955	1-216-833-11	METAL CHIP	10K	5%	1/16W
R956	1-216-833-11	METAL CHIP	10K	5%	1/16W
R957	1-216-864-11	METAL CHIP	0	5%	1/16W
R958	1-216-833-11	METAL CHIP	10K	5%	1/16W
R960	1-216-864-11	METAL CHIP	0	5%	1/16W
R961	1-216-833-11	METAL CHIP	10K	5%	1/16W
R962	1-216-833-11	METAL CHIP	10K	5%	1/16W
R963	1-216-833-11	METAL CHIP	10K	5%	1/16W
R964	1-216-833-11	METAL CHIP	10K	5%	1/16W
R965	1-216-813-11	METAL CHIP	220	5%	1/16W
R966	1-216-817-11	METAL CHIP	470	5%	1/16W
R967	1-216-817-11	METAL CHIP	470	5%	1/16W
R968	1-216-821-11	METAL CHIP	1K	5%	1/16W
R969	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R970	1-216-821-11	METAL CHIP	1K	5%	1/16W
R971	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R972	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R973	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R974	1-216-821-11	METAL CHIP	1K	5%	1/16W
R975	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R976	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R977	1-216-817-11	METAL CHIP	470	5%	1/16W
R978	1-216-817-11	METAL CHIP	470	5%	1/16W
R979	1-216-813-11	METAL CHIP	220	5%	1/16W
R980	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R981	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R982	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R983	1-216-827-11	METAL CHIP	3.3K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R984	1-216-821-11	METAL CHIP	1K	5%	1/16W
R986	1-216-864-11	METAL CHIP	0	5%	1/16W
R988	1-216-864-11	METAL CHIP	0	5%	1/16W
R995	1-216-864-11	METAL CHIP	0	5%	1/16W
		< VIBRATOR >			
X201	1-579-780-21	VIBRATOR, CRYSTAL			
X501	1-760-193-11	VIBRATOR, CRYSTAL 14.1875 MHz			
X502	1-579-780-21	VIBRATOR, CRYSTAL 17.734 MHz			
X503	1-577-101-11	VIBRATOR, CERAMIC			
X504	1-579-780-21	VIBRATOR, CRYSTAL 17.734 MHz			
X505	1-579-070-41	VIBRATOR, CRYSTAL 16 MHz			
**********					
*	A-7066-122-A	ED-41 BOARD, COMPLETE			
		**********			
		(Ref. No. 2,000 Seriese)			
		< CONNECTOR >			
CN260	1-565-388-21	CONNECTOR, D-SUB 9P (ENL IN/OUT)			
		< DIODE >			
D851	8-719-107-15	DIODE RD18M-B2			
D852	8-719-107-15	DIODE RD18M-B2			
D853	8-719-107-15	DIODE RD18M-B2			
D854	8-719-107-15	DIODE RD18M-B2			
D855	8-719-107-15	DIODE RD18M-B2			
D856	8-719-107-15	DIODE RD18M-B2			
D857	8-719-107-15	DIODE RD18M-B2			
D858	8-719-107-15	DIODE RD18M-B2			
D859	8-719-107-15	DIODE RD18M-B2			
D860	8-719-107-15	DIODE RD18M-B2			
D861	8-719-107-15	DIODE RD18M-B2			
D862	8-719-107-15	DIODE RD18M-B2			
D863	8-719-107-15	DIODE RD18M-B2			
D864	8-719-107-15	DIODE RD18M-B2			
		< FERRITE BEAD >			
FB260	1-543-775-11	FILTER, EMI			
FB261	1-543-775-11	FILTER, EMI			
FB262	1-543-775-11	FILTER, EMI			
FB263	1-543-775-11	FILTER, EMI			
FB264	1-543-775-11	FILTER, EMI			
FB265	1-543-775-11	FILTER, EMI			
FB266	1-543-775-11	FILTER, EMI			
**********					

Ref. No.	Part No.	Description			Remarks
*	A-7066-120-A	FU-123 BOARD, COMPLETE			
		**********			
		(Ref. No. 3,000 Seriese)			
		< CAPACITOR >			
C601	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C602	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C603	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C604	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C605	1-124-779-00	ELECT CHIP	10uF	20%	16V
C606	1-126-103-11	ELECT	470uF	20%	16V
		< CONNECTOR >			
* CN601	1-560-893-00	PIN, CONNECTOR 5P			
* CN602	1-560-896-00	PIN, CONNECTOR 8P			
CN603	1-506-473-11	PIN, CONNECTOR 8P			
CN604	1-506-468-11	PIN, CONNECTOR 3P			
* CN605	1-564-007-11	PIN, CONNECTOR 8P			
CN606	1-506-471-11	PIN, CONNECTOR 6P			
CN607	1-506-471-11	PIN, CONNECTOR 6P			
CN608	1-506-471-11	PIN, CONNECTOR 6P			
CN609	1-506-469-11	PIN, CONNECTOR 4P			
		< IC >			
IC601	8-759-604-39	IC AN6291 (+12V REG)			
		< COIL >			
L601	1-410-678-31	INDUCTOR 220uH			
L602	1-410-678-31	INDUCTOR 220uH			
		< IC LINK >			
⚠PS601	1-532-685-21	LINK, IC			
⚠PS602	1-532-685-21	LINK, IC			
⚠PS603	1-532-727-11	LINK, IC 0.25A			
⚠PS604	1-532-605-21	LINK, IC			
⚠PS605	1-532-675-00	LINK, IC 1.5A			
⚠PS606	1-532-675-00	LINK, IC 1.5A			
⚠PS607	1-532-637-21	LINK, IC			
⚠PS608	1-532-605-21	LINK, IC			
⚠PS609	1-532-675-00	LINK, IC 1.5A			
⚠PS610	1-532-675-00	LINK, IC 1.5A			
⚠PS611	1-532-675-00	LINK, IC 1.5A			
⚠PS612	1-532-675-00	LINK, IC 1.5A			
⚠PS613	1-532-675-00	LINK, IC 1.5A			
**********					

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
*	A-7066-118-A	JS-25 BOARD, COMPLETE			
		**********			
					(Ref. No. 3,000 Seriese)
	1-751-567-11	CABLE, FLAT (FJS-1)			
	3-956-977-01	STICK, JOY			
*	3-956-995-01	COVER, STICK			
*	3-957-732-01	HOLDER, JS LED			
		< CAPACITOR >			
C701	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C702	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C703	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C704	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C705	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C706	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C707	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C708	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C801	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C802	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C803	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C804	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C805	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C806	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C807	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C808	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C809	1-163-031-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
* CN801	1-569-035-11	CONNECTOR, FPC (ZIF) 30P			
		< DIODE >			
D801	8-719-800-55	LED TLS123 (SOFT)			
D803	8-719-800-55	LED TLS123 (CHROMAKEY/LUMINA KEY)			
D804	8-719-800-55	LED TLS123 (BORDER)			
D807	8-719-800-55	LED TLS123 (OFF)			
D809	8-719-800-55	LED TLS123 (POSITION)			
D810	8-719-800-55	LED TLS123 (COLOR CORRECTION)			
		< IC >			
IC701	8-759-011-65	IC MC74HC4053F (SWITCHER)			
IC801	8-759-011-65	IC MC74HC4053F (SWITCHER)			
		< SWITCH >			
LS801	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T) (A-BUS)			
LS802	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T) (B-BUS)			
LS803	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T)			(MEMORY RECALL)
LS804	1-692-518-11	SWITCH, TACTIL (LS22BB-2SD/SD-T) (ON/OFF)			

Ref. No.	Part No.	Description			Remarks
		< VARIABLE RESISTOR >			
RV701	1-241-010-11	RES, VAR, CARBON 10K (A-BUS HUE)			
RV702	1-241-010-11	RES, VAR, CARBON 10K (A-BUS LUMINANCE)			
RV703	1-241-010-11	RES, VAR, CARBON 10K (A-BUS CHROMINANCE)			
RV704	1-241-010-11	RES, VAR, CARBON 10K (B-BUS HUE)			
RV705	1-241-010-11	RES, VAR, CARBON 10K (B-BUS LUMINANCE)			
RV706	1-241-010-11	RES, VAR, CARBON 10K (B-BUS CHROMINANCE)			
RV801	1-241-010-11	RES, VAR, CARBON 10K (CLIP/CLIP HIGH)			
RV802	1-241-010-11	RES, VAR, CARBON 10K (HUE)			
RV803	1-241-010-11	RES, VAR, CARBON 10K (GAIN/CLIP LOW)			
RV804	1-237-423-21	RES, VAR, CARBON 1K/1K (COLOR CORRECTION)			
RV805	1-237-423-21	RES, VAR, CARBON 1K/1K (POSITION)			
		< SWITCH >			
S801	1-571-787-11	SWITCH, TACTILE (STORE)			
S802	1-571-787-11	SWITCH, TACTILE (PATTERN EDGE)			
S803	1-571-787-11	SWITCH, TACTILE (▼)			
S804	1-571-787-11	SWITCH, TACTILE (▲)			
**********					
*	A-7063-837-A	KS-15 BOARD, COMPLETE			
		**********			
					(Ref. No. 3,000 Seriese)
	3-956-994-01	SHEET, INDICATION (P1)			
	3-956-994-11	SHEET, INDICATION (P2)			
	3-956-994-21	SHEET, INDICATION (AUX)			
	3-956-994-31	SHEET, INDICATION (BKGD)			
		< BUZZER >			
BZ100	1-529-070-11	BUZZER			
		< CAPACITOR >			
C100	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C101	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C102	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C103	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C104	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C105	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C106	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C107	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C108	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C109	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C110	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C111	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C112	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C113	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C114	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C115	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C116	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C117	1-124-779-00	ELECT CHIP	10uF	20%	16V
C118	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C119	1-124-779-00	ELECT CHIP	10uF	20%	16V

Ref. No.	Part No.	Description			Remarks
C120	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C121	1-124-779-00	ELECT CHIP	10uF	20%	16V
C122	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C123	1-124-779-00	ELECT CHIP	10uF	20%	16V
C124	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C125	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C126	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C127	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C128	1-124-779-00	ELECT CHIP	10uF	20%	16V
C129	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C130	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C131	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C132	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C133	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C134	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C135	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C136	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C137	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C138	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C139	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C140	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C141	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C142	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C143	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C144	1-126-206-11	ELECT CHIP	100uF	20%	6.3V

< CONNECTOR >

* CN100	1-569-035-11	CONNECTOR, FPC (ZIF) 30P	
CN101	1-580-723-11	CONNECTOR, BOARD TO BOARD 28P	
CN102	1-580-723-11	CONNECTOR, BOARD TO BOARD 28P	
CN103	1-566-535-11	CONNECTOR, FPC (ZIF) 19P	
* CN104	1-564-013-11	PIN, CONNECTOR 3P	
CN105	1-506-485-11	PIN, CONNECTOR 6P	
* CN106	1-565-211-11	CONNECTOR, FPC (ZIF) 22P	

< DIODE >

D100	8-719-104-34	DIODE	1S2836
D101	8-719-104-34	DIODE	1S2836
D102	8-719-104-34	DIODE	1S2836
D103	8-719-104-34	DIODE	1S2836
D104	8-719-104-34	DIODE	1S2836
D105	8-719-104-34	DIODE	1S2836
D106	8-719-104-34	DIODE	1S2836
D107	8-719-104-34	DIODE	1S2836
D108	8-719-029-43	DIODE	CL-140SD-CD-T (9)
D109	8-719-029-43	DIODE	CL-140SD-CD-T (+)
D140	8-719-913-53	LED	LA-301VL (TRANSRATE 8)
D141	8-719-913-53	LED	LA-301VL (TRANSRATE 8)
D142	8-719-913-53	LED	LA-301VL (TRANSRATE 8)
D143	8-719-029-43	DIODE	CL-140SD-CD-T (AUDIO FOLLOW)
D144	8-719-029-43	DIODE	CL-140SD-CD-T (COLOR BACKGROUND)

Ref. No.	Part No.	Description	Remarks
D147	8-719-029-43	DIODE CL-140SD-CD-T	(VIDEO)
D148	8-719-029-43	DIODE CL-140SD-CD-T	(VIDEO)
D149	8-719-029-43	DIODE CL-140SD-CD-T	(AUDIO)
D150	8-719-029-43	DIODE CL-140SD-CD-T	(AUDIO)
D151	8-719-029-43	DIODE CL-140SD-CD-T	(FADE)
D152	8-719-029-43	DIODE CL-140SD-CD-T	(FADE)
D153	8-719-029-43	DIODE CL-140SD-CD-T	(AUTO TRANS/PAUSE)
D154	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D155	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D156	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D157	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D158	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D159	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D160	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D161	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D162	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D163	8-719-029-43	DIODE CL-140SD-CD-T	(EFFECT TRANSITION)
D164	8-719-104-34	DIODE 1S2836	
D165	8-719-104-34	DIODE 1S2836	
D166	8-719-104-34	DIODE 1S2836	
D167	8-719-104-34	DIODE 1S2836	
D168	8-719-104-34	DIODE 1S2836	
D169	8-719-104-34	DIODE 1S2836	
D170	8-719-104-34	DIODE 1S2836	
D171	8-719-104-34	DIODE 1S2836	
D172	8-719-029-43	DIODE CL-140SD-CD-T	(7)
D173	8-719-029-43	DIODE CL-140SD-CD-T	(8)
D174	8-719-029-43	DIODE CL-140SD-CD-T	(4)
D175	8-719-029-43	DIODE CL-140SD-CD-T	(5)
D176	8-719-029-43	DIODE CL-140SD-CD-T	(6)
D177	8-719-029-43	DIODE CL-140SD-CD-T	(-)
D178	8-719-029-43	DIODE CL-140SD-CD-T	(1)
D179	8-719-029-43	DIODE CL-140SD-CD-T	(2)
D180	8-719-029-43	DIODE CL-140SD-CD-T	(3)
D181	8-719-029-43	DIODE CL-140SD-CD-T	(CLR)
D182	8-719-029-43	DIODE CL-140SD-CD-T	(0)
D183	8-719-029-43	DIODE CL-140SD-CD-T	(00)
D184	8-719-029-43	DIODE CL-140SD-CD-T	(BS)
D185	8-719-029-43	DIODE CL-140SD-CD-T	(ENT)
D188	8-719-029-43	DIODE CL-140SD-CD-T	(NORMAL MIX)
D189	8-719-029-43	DIODE CL-140SD-CD-T	(LUMINA CLIP TRANS)
D190	8-719-029-43	DIODE CL-140SD-CD-T	(MOSAIK MIX)
D191	8-719-029-43	DIODE CL-140SD-CD-T	(LUMINA KEY)
D192	8-719-029-43	DIODE CL-140SD-CD-T	(POSTRZ MIX)
D193	8-719-029-43	DIODE CL-140SD-CD-T	(CHROMA KEY)
D194	8-719-029-43	DIODE CL-140SD-CD-T	(B & W MIX)
D195	8-719-029-43	DIODE CL-140SD-CD-T	(P in P)
D196	8-719-029-43	DIODE CL-140SD-CD-T	(▤)
D197	8-719-029-43	DIODE CL-140SD-CD-T	(▣)
D198	8-719-029-43	DIODE CL-140SD-CD-T	(▣)

Ref. No.	Part No.	Description	Remarks
D199	8-719-029-43	DIODE CL-140SD-CD-T (USER 2)	
D200	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D201	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D202	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D203	8-719-029-43	DIODE CL-140SD-CD-T (USER 1)	
D204	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D205	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D206	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D207	8-719-029-43	DIODE CL-140SD-CD-T (SCROLL)	
D208	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D209	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D210	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D211	8-719-029-43	DIODE CL-140SD-CD-T (SIDE OUT)	
D212	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D213	8-719-029-43	DIODE CL-140SD-CD-T ( )	
D214	8-719-029-43	DIODE CL-140SD-CD-T (SPLIT SLIDE)	
D215	8-719-029-43	DIODE CL-140SD-CD-T (SLIDE IN)	
		< IC >	
IC100	8-759-011-65	IC MC74HC4053F (SELECT SWITCH)	
IC101	8-759-927-29	IC SN74HCU04ANS (OSC)	
IC102	8-759-234-67	IC TMP82C79M-2 (KEY/LED CONTROLLER)	
IC103	8-759-234-67	IC TMP82C79M-2 (KEY/LED CONTROLLER)	
IC104	8-759-926-42	IC SN74HC238ANS (DECODER)	
IC105	8-759-926-11	IC SN74HC138ANS (DECODER)	
IC106	8-759-926-42	IC SN74HC238ANS (DECODER)	
IC107	8-759-926-11	IC SN74HC138ANS (DECODER)	
IC108	8-759-051-53	IC TD62381F (INVDRIVER)	
IC109	8-759-051-53	IC TD62381F (INVDRIVER)	
IC110	8-759-051-53	IC TD62381F (INVDRIVER)	
IC111	8-759-051-53	IC TD62381F (INVDRIVER)	
IC112	8-759-051-53	IC TD62381F (INVDRIVER)	
IC113	8-759-063-30	IC MC74HC374AF (DATA BUS LATCH)	
IC114	8-759-063-30	IC MC74HC374AF (DATA BUS LATCH)	
IC115	8-759-032-20	IC MC74HC32AF (CHIP SELECT)	
		< COIL >	
L100	1-410-381-11	INDUCTOR CHIP 10uH	
L101	1-410-381-11	INDUCTOR CHIP 10uH	
		< SWITCH >	
LS100	1-692-518-11	SWITCH, TACTIL(LS22BB-2SD/SD-T)	(WHITE FADE)
LS101	1-692-518-11	SWITCH, TACTIL(LS22BB-2SD/SD-T)	(LEVER PAUSE)
LS102	1-692-518-11	SWITCH, TACTIL(LS22BB-2SD/SD-T)	(BLACK FADE)
LS103	1-692-518-11	SWITCH, TACTIL(LS22BB-2SD/SD-T)	(REVERSE)
LS104	1-692-518-11	SWITCH, TACTIL(LS22BB-2SD/SD-T)	(CUT)
LS105	1-692-518-11	SWITCH, TACTIL(LS22BB-2SD/SD-T)	(A-BUS INPUT EFFECT)
LS106	1-692-518-11	SWITCH, TACTIL(LS22BB-2SD/SD-T)	(B-BUS INPUT EFFECT)
LS107	1-692-720-11	SWITCH, PUSH (LED)	(A-BUS P1)
LS108	1-692-720-11	SWITCH, PUSH (LED)	(A-BUS P2)
LS109	1-692-720-11	SWITCH, PUSH (LED)	(A-BUS AUX)
LS110	1-692-720-11	SWITCH, PUSH (LED)	(A-BUS BKGD)
LS111	1-692-720-11	SWITCH, PUSH (LED)	(B-BUS P1)
LS112	1-692-720-11	SWITCH, PUSH (LED)	(B-BUS P2)
LS113	1-692-720-11	SWITCH, PUSH (LED)	(B-BUS AUX)
LS114	1-692-720-11	SWITCH, PUSH (LED)	(B-BUS BKGD)
		< TRANSISTOR >	
Q100	8-729-901-04	TRANSISTOR DTA114EK	
Q103	8-729-904-48	TRANSISTOR DTB113EK	
Q105	8-729-904-48	TRANSISTOR DTB113EK	
Q106	8-729-904-48	TRANSISTOR DTB113EK	
Q107	8-729-904-48	TRANSISTOR DTB113EK	
Q108	8-729-904-48	TRANSISTOR DTB113EK	
Q109	8-729-904-48	TRANSISTOR DTB113EK	
Q110	8-729-904-48	TRANSISTOR DTB113EK	
Q111	8-729-904-48	TRANSISTOR DTB113EK	
Q112	8-729-904-48	TRANSISTOR DTB113EK	
Q113	8-729-904-48	TRANSISTOR DTB113EK	
Q114	8-729-904-48	TRANSISTOR DTB113EK	
Q115	8-729-904-48	TRANSISTOR DTB113EK	
Q116	8-729-904-48	TRANSISTOR DTB113EK	
Q117	8-729-904-48	TRANSISTOR DTB113EK	
Q118	8-729-904-48	TRANSISTOR DTB113EK	
Q119	8-729-901-04	TRANSISTOR DTA114EK	
		< RESISTOR >	
R102	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R103	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R104	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R105	1-216-164-00	METAL GLAZE 39 5% 1/8W	
R106	1-216-164-00	METAL GLAZE 39 5% 1/8W	
R107	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R108	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R109	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R110	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R111	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R112	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R113	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R114	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R116	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R117	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R118	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R119	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R120	1-216-164-00	METAL GLAZE 39 5% 1/8W	
R121	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R122	1-216-089-91	METAL GLAZE 47K 5% 1/10W	

KS-15

Ref. No.	Part No.	Description			Remarks
R123	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R124	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R125	1-216-081-00	METAL CHIP	22K	5%	1/10W
R126	1-216-164-00	METAL GLAZE	39	5%	1/8W
R127	1-216-164-00	METAL GLAZE	39	5%	1/8W
R128	1-216-164-00	METAL GLAZE	39	5%	1/8W
R129	1-216-164-00	METAL GLAZE	39	5%	1/8W
R130	1-216-164-00	METAL GLAZE	39	5%	1/8W
R131	1-216-164-00	METAL GLAZE	39	5%	1/8W
R132	1-216-164-00	METAL GLAZE	39	5%	1/8W
R133	1-216-031-00	METAL CHIP	180	5%	1/10W
R134	1-216-164-00	METAL GLAZE	39	5%	1/8W
R135	1-216-031-00	METAL CHIP	180	5%	1/10W
R136	1-216-164-00	METAL GLAZE	39	5%	1/8W
R137	1-216-164-00	METAL GLAZE	39	5%	1/8W
R138	1-216-031-00	METAL CHIP	180	5%	1/10W
R139	1-216-073-00	METAL CHIP	10K	5%	1/10W
R140	1-216-164-00	METAL GLAZE	39	5%	1/8W
R141	1-216-164-00	METAL GLAZE	39	5%	1/8W
R142	1-216-164-00	METAL GLAZE	39	5%	1/8W
R143	1-216-031-00	METAL CHIP	180	5%	1/10W
R145	1-216-031-00	METAL CHIP	180	5%	1/10W
R146	1-216-031-00	METAL CHIP	180	5%	1/10W
R147	1-216-031-00	METAL CHIP	180	5%	1/10W
R148	1-216-031-00	METAL CHIP	180	5%	1/10W
R149	1-216-031-00	METAL CHIP	180	5%	1/10W
R150	1-216-031-00	METAL CHIP	180	5%	1/10W
R151	1-216-031-00	METAL CHIP	180	5%	1/10W
R152	1-216-031-00	METAL CHIP	180	5%	1/10W
R153	1-216-031-00	METAL CHIP	180	5%	1/10W
R154	1-216-031-00	METAL CHIP	180	5%	1/10W
R155	1-216-031-00	METAL CHIP	180	5%	1/10W
R156	1-216-031-00	METAL CHIP	180	5%	1/10W
R157	1-216-031-00	METAL CHIP	180	5%	1/10W
R158	1-216-031-00	METAL CHIP	180	5%	1/10W
R159	1-216-031-00	METAL CHIP	180	5%	1/10W
R160	1-216-031-00	METAL CHIP	180	5%	1/10W
R161	1-216-031-00	METAL CHIP	180	5%	1/10W
R162	1-216-031-00	METAL CHIP	180	5%	1/10W
R163	1-216-031-00	METAL CHIP	180	5%	1/10W
R164	1-216-031-00	METAL CHIP	180	5%	1/10W
R165	1-216-031-00	METAL CHIP	180	5%	1/10W
R166	1-216-031-00	METAL CHIP	180	5%	1/10W
R167	1-216-031-00	METAL CHIP	180	5%	1/10W
R168	1-216-031-00	METAL CHIP	180	5%	1/10W
R169	1-216-031-00	METAL CHIP	180	5%	1/10W
R170	1-216-031-00	METAL CHIP	180	5%	1/10W
R171	1-216-031-00	METAL CHIP	180	5%	1/10W
R172	1-216-031-00	METAL CHIP	180	5%	1/10W
R173	1-216-031-00	METAL CHIP	180	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R174	1-216-031-00	METAL CHIP	180	5%	1/10W
R175	1-216-031-00	METAL CHIP	180	5%	1/10W
R176	1-216-031-00	METAL CHIP	180	5%	1/10W
R177	1-216-031-00	METAL CHIP	180	5%	1/10W
R178	1-216-031-00	METAL CHIP	180	5%	1/10W
R179	1-216-031-00	METAL CHIP	180	5%	1/10W
R180	1-216-031-00	METAL CHIP	180	5%	1/10W
R181	1-216-031-00	METAL CHIP	180	5%	1/10W
R182	1-216-031-00	METAL CHIP	180	5%	1/10W
R183	1-216-031-00	METAL CHIP	180	5%	1/10W
R184	1-216-031-00	METAL CHIP	180	5%	1/10W
R185	1-216-031-00	METAL CHIP	180	5%	1/10W
R186	1-216-295-91	METAL GLAZE	0	5%	1/10W
R187	1-216-295-91	METAL GLAZE	0	5%	1/10W
R188	1-216-295-91	METAL GLAZE	0	5%	1/10W
R189	1-216-295-91	METAL GLAZE	0	5%	1/10W
R190	1-216-295-91	METAL GLAZE	0	5%	1/10W
R191	1-216-295-91	METAL GLAZE	0	5%	1/10W
R192	1-216-295-91	METAL GLAZE	0	5%	1/10W
R193	1-216-295-91	METAL GLAZE	0	5%	1/10W
R202	1-216-295-91	METAL GLAZE	0	5%	1/10W
R210	1-216-295-91	METAL GLAZE	0	5%	1/10W
R212	1-216-295-91	METAL GLAZE	0	5%	1/10W
R213	1-216-295-91	METAL GLAZE	0	5%	1/10W
R214	1-216-295-91	METAL GLAZE	0	5%	1/10W
R215	1-216-295-91	METAL GLAZE	0	5%	1/10W
R216	1-216-295-91	METAL GLAZE	0	5%	1/10W
R217	1-216-295-91	METAL GLAZE	0	5%	1/10W
R218	1-216-295-91	METAL GLAZE	0	5%	1/10W
R219	1-216-295-91	METAL GLAZE	0	5%	1/10W
R220	1-216-295-91	METAL GLAZE	0	5%	1/10W
R221	1-216-295-91	METAL GLAZE	0	5%	1/10W
R223	1-216-295-91	METAL GLAZE	0	5%	1/10W
R224	1-216-295-91	METAL GLAZE	0	5%	1/10W
R225	1-216-295-91	METAL GLAZE	0	5%	1/10W
R226	1-216-295-91	METAL GLAZE	0	5%	1/10W
R227	1-216-295-91	METAL GLAZE	0	5%	1/10W
R228	1-216-295-91	METAL GLAZE	0	5%	1/10W
R229	1-216-295-91	METAL GLAZE	0	5%	1/10W

< SWITCH >

S100	1-571-787-11	SWITCH, TACTILE (7)
S101	1-571-787-11	SWITCH, TACTILE (8)
S102	1-571-787-11	SWITCH, TACTILE (9)
S103	1-571-787-11	SWITCH, TACTILE (+)
S104	1-571-787-11	SWITCH, TACTILE (4)
S105	1-571-787-11	SWITCH, TACTILE (5)
S106	1-571-787-11	SWITCH, TACTILE (6)
S107	1-571-787-11	SWITCH, TACTILE (-)
S108	1-571-787-11	SWITCH, TACTILE (1)
S109	1-571-787-11	SWITCH, TACTILE (2)

Ref. No.	Part No.	Description	Remarks
S110	1-571-787-11	SWITCH, TACTILE (3)	
S111	1-571-787-11	SWITCH, TACTILE (CLR)	
S112	1-571-787-11	SWITCH, TACTILE (0)	
S113	1-571-787-11	SWITCH, TACTILE (00)	
S114	1-571-787-11	SWITCH, TACTILE (BS)	
S115	1-571-787-11	SWITCH, TACTILE (ENT)	
S116	1-571-787-11	SWITCH, TACTILE ( )	
S117	1-571-787-11	SWITCH, TACTILE ( )	
S118	1-571-787-11	SWITCH, TACTILE ( )	
S119	1-571-787-11	SWITCH, TACTILE ( )	
S120	1-571-787-11	SWITCH, TACTILE ( )	
S121	1-571-787-11	SWITCH, TACTILE (NORMAL MIX)	
S122	1-571-787-11	SWITCH, TACTILE (LUMINA CLIP TRANS)	
S123	1-571-787-11	SWITCH, TACTILE ( )	
S124	1-571-787-11	SWITCH, TACTILE ( )	
S125	1-571-787-11	SWITCH, TACTILE ( )	
S126	1-571-787-11	SWITCH, TACTILE ( )	
S127	1-571-787-11	SWITCH, TACTILE ( )	
S128	1-571-787-11	SWITCH, TACTILE (MOSAIK MIX)	
S129	1-571-787-11	SWITCH, TACTILE (LUMINA KEY)	
S130	1-571-787-11	SWITCH, TACTILE (SPLIT SLIDE)	
S131	1-571-787-11	SWITCH, TACTILE ( )	
S132	1-571-787-11	SWITCH, TACTILE ( )	
S133	1-571-787-11	SWITCH, TACTILE ( )	
S134	1-571-787-11	SWITCH, TACTILE ( )	
S135	1-571-787-11	SWITCH, TACTILE (POSTRZ MIX)	
S136	1-571-787-11	SWITCH, TACTILE (CHROMA KEY)	
S137	1-571-787-11	SWITCH, TACTILE (SLIDE A)	
S138	1-571-787-11	SWITCH, TACTILE (SLIDE OUT)	
S139	1-571-787-11	SWITCH, TACTILE (SCROLL)	
S140	1-571-787-11	SWITCH, TACTILE (USER 1)	
S141	1-571-787-11	SWITCH, TACTILE (USER 2)	
S142	1-571-787-11	SWITCH, TACTILE (B & W MIX)	
S143	1-571-787-11	SWITCH, TACTILE (P in P)	
S144	1-571-787-11	SWITCH, TACTILE (VIDEO/AUDIO/FADE)	
S145	1-571-787-11	SWITCH, TACTILE (TRANSRATE)	
S146	1-571-787-11	SWITCH, TACTILE (TRANSRATE)	
S147	1-571-787-11	SWITCH, TACTILE (TRANSRATE)	
S148	1-571-787-11	SWITCH, TACTILE (AUTO TARNS/PAUSE)	
S149	1-571-787-11	SWITCH, TACTILE (AUDIO FOLLOW)	
S150	1-571-787-11	SWITCH, TACTILE (▼)	
S151	1-571-787-11	SWITCH, TACTILE (▲)	
		< VIBRATOR >	
X100	1-577-213-11	VIBRATOR, CRYSTAL 2MHz	

****

Ref. No.	Part No.	Description		Remarks
*	1-649-632-11	KY-22 BOARD		
		**********		
		(Ref. No. 8,000 Series)		
		< CAPACITOR >		
C100	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C101	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C102	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C103	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C104	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C105	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C106	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C107	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C108	1-163-257-11	CERAMIC CHIP 180PF	5%	50V
C109	1-163-257-11	CERAMIC CHIP 180PF	5%	50V
C110	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C111	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C112	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C113	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C114	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C115	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C116	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C117	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C118	1-165-319-11	CERAMIC CHIP 0.1uF		50V
C119	1-124-443-00	ELECT 100uF	20%	6.3V
C120	1-124-443-00	ELECT 100uF	20%	6.3V
C121	1-163-257-11	CERAMIC CHIP 180PF	5%	50V
C122	1-163-257-11	CERAMIC CHIP 180PF	5%	50V
C123	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
		< CONNECTOR >		
CN100	1-566-535-11	CONNECTOR, FPC (ZIF) 19P		
CN101	1-564-014-11	PIN, CONNECTOR 4P		
CN102	1-504-485-11	PIN, CONNECTOR 6P		
CN103	1-565-211-11	CONNECTOR, FPC (ZIF) 22P		
		< DIODE >		
D100	8-719-974-44	DIODE PG4553KY (PLAY)		
D101	8-719-946-52	DIODE GL8EG22 (◀)		
D102	8-719-946-52	DIODE GL8EG22 (▶)		
D103	8-719-029-43	DIODE CL-140SD-CD-T (PREVIEW)		
D104	8-719-939-09	DIODE AA4553K (IN)		
D105	8-719-939-09	DIODE AA4553K (CUT EDIT)		
D107	8-719-939-09	DIODE AA4553K (A-ROLL)		
D108	8-719-104-34	DIODE 1S2835		
D109	8-719-028-06	DIODE CL-140UR-CD (AUTO ASM)		
D110	8-719-939-09	DIODE AA4553K (OUT)		
D111	8-719-939-09	DIODE AA4553K (ASMBL)		
D112	8-719-939-09	DIODE AA4553K (MIX)		
D113	8-719-939-09	DIODE AA4553K (SOURCE)		
D114	8-719-104-34	DIODE 1S2835		
D115	8-719-974-43	DIODE BR4553K (AUTO EDIT/END)		

Ref. No.	Part No.	Description	Remarks
D116	8-719-939-09	DIODE AA4553K (DUR)	
D117	8-719-939-09	DIODE AA4553K (V)	
D118	8-719-939-09	DIODE AA4553K (WIPE)	
D119	8-719-939-09	DIODE AA4553K (PGM)	
D120	8-719-939-09	DIODE AA4553K (REW)	
D121	8-719-974-43	DIODE BR4553K (REC)	
D122	8-719-939-09	DIODE AA4553K (P1)	
D123	8-719-104-34	DIODE 1S2835	
D124	8-719-029-43	DIODE CL-140SD-CD-T (SET-IN)	
D125	8-719-939-09	DIODE AA4553K (GO TO)	
D126	8-719-939-09	DIODE AA4553K (A1)	
D127	8-719-939-09	DIODE AA4553K (MAN)	
D128	8-719-939-09	DIODE AA4553K (A-BUS)	
D129	8-719-939-09	DIODE AA4553K (FF)	
D130	8-719-939-09	DIODE AA4553K (SPEED)	
D131	8-719-939-09	DIODE AA4553K (P2)	
D132	8-719-104-34	DIODE 1S2835	
D133	8-719-104-34	DIODE 1S2835	
D134	8-719-029-43	DIODE CL-140SD-CD-T (SET-OUT)	
D135	8-719-939-09	DIODE AA4553K (CLEAR)	
D136	8-719-939-09	DIODE AA4553K (A2)	
D137	8-719-029-43	DIODE CL-140SD-CD-T	
D138	8-719-939-09	DIODE AA4553K (B-BUS)	
D140	8-719-939-09	DIODE AA4553K (DMC)	
D141	8-719-939-09	DIODE AA4553K (R-VTR)	
D142	8-719-104-34	DIODE 1S2835	
D143	8-719-104-34	DIODE 1S2835	
D144	8-719-104-34	DIODE 1S2835	
D145	8-719-946-84	DIODE GL8HS22 (■)	
D146	8-719-939-09	DIODE AA4553K (STILL)	
D147	8-719-939-09	DIODE AA4553K (AUX)	
D148	8-719-939-09	DIODE AA4553K (AUDIO SPLIT)	
D149	8-719-939-09	DIODE AA4553K (REVIEW)	
D150	8-719-939-09	DIODE AA4553K (SET DUR)	
		< IC >	
IC100	8-759-927-29	IC SN74HCU04ANS (OSC)	
IC101	8-759-500-43	IC CXD8117P (J/S ENCODER)	
IC102	8-759-234-67	IC TMP82C79M-2 (KEY/LED CONTROLER)	
IC103	9-906-939-01	IC TD62383P (DRIVER)	
IC104	8-759-926-11	IC SN74HC138ANS (DECODER)	
		< COIL >	
L100	1-410-381-11	INDUCTOR 10uH	
		< PUSH SWITCH >	
LS107	1-692-720-11	SWITCH, PUSH (LED)	
LS108	1-692-720-11	SWITCH, PUSH (LED)	
LS109	1-692-720-11	SWITCH, PUSH (LED)	
LS110	1-692-720-11	SWITCH, PUSH (LED)	
LS111	1-692-720-11	SWITCH, PUSH (LED)	
LS112	1-692-720-11	SWITCH, PUSH (LED)	
LS113	1-692-720-11	SWITCH, PUSH (LED)	
LS114	1-692-720-11	SWITCH, PUSH (LED)	
		< TRANSISTOR >	
Q100	8-729-904-48	TRANSISTOR DTB113EK	
Q101	8-729-904-48	TRANSISTOR DTB113EK	
Q102	8-729-904-48	TRANSISTOR DTB113EK	
Q103	8-729-904-48	TRANSISTOR DTB113EK	
Q104	8-729-904-48	TRANSISTOR DTB113EK	
Q105	8-729-904-48	TRANSISTOR DTB113EK	
Q106	8-729-904-48	TRANSISTOR DTB113EK	
Q107	8-729-901-04	TRANSISTOR DTA114EK	
		< RESISTOR >	
R100	1-216-295-11	METAL CHIP 0 5% 1/10W	
R101	1-216-295-11	METAL CHIP 0 5% 1/10W	
R102	1-216-295-11	METAL CHIP 0 5% 1/10W	
R103	1-216-295-11	METAL CHIP 0 5% 1/10W	
R104	1-216-295-11	METAL CHIP 0 5% 1/10W	
R105	1-216-295-11	METAL CHIP 0 5% 1/10W	
R106	1-216-295-11	METAL CHIP 0 5% 1/10W	
R107	1-216-295-11	METAL CHIP 0 5% 1/10W	
R109	1-216-295-11	METAL CHIP 0 5% 1/10W	
R110	1-216-295-11	METAL CHIP 0 5% 1/10W	
R111	1-216-295-11	METAL CHIP 0 5% 1/10W	
R112	1-216-295-11	METAL CHIP 0 5% 1/10W	
R113	1-216-295-11	METAL CHIP 0 5% 1/10W	
R114	1-216-295-11	METAL CHIP 0 5% 1/10W	
R115	1-216-295-11	METAL CHIP 0 5% 1/10W	
R116	1-216-295-11	METAL CHIP 0 5% 1/10W	
R117	1-216-295-11	METAL CHIP 0 5% 1/10W	
R118	1-216-089-91	METAL CHIP 47K 5% 1/10W	
R119	1-216-089-91	METAL CHIP 47K 5% 1/10W	
R120	1-216-089-91	METAL CHIP 47K 5% 1/10W	
R122	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R123	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R124	1-216-089-91	METAL CHIP 47K 5% 1/10W	
R125	1-216-089-91	METAL CHIP 47K 5% 1/10W	
R126	1-216-089-91	METAL CHIP 47K 5% 1/10W	
R127	1-216-089-91	METAL CHIP 47K 5% 1/10W	
R128	1-216-089-91	METAL CHIP 47K 5% 1/10W	
R129	1-216-031-00	METAL CHIP 180 5% 1/10W	
R130	1-216-031-00	METAL CHIP 180 5% 1/10W	
R131	1-216-031-00	METAL CHIP 180 5% 1/10W	
R132	1-216-031-00	METAL CHIP 180 5% 1/10W	
R133	1-216-031-00	METAL CHIP 180 5% 1/10W	
R134	1-216-031-00	METAL CHIP 180 5% 1/10W	
R135	1-216-031-00	METAL CHIP 180 5% 1/10W	
R136	1-216-031-00	METAL CHIP 180 5% 1/10W	

Ref. No.	Part No.	Description			Remarks
R137	1-216-031-00	METAL CHIP	180	5%	1/10W
R138	1-216-031-00	METAL CHIP	180	5%	1/10W
R139	1-216-031-00	METAL CHIP	180	5%	1/10W
R140	1-216-031-00	METAL CHIP	180	5%	1/10W
R141	1-216-031-00	METAL CHIP	180	5%	1/10W
R142	1-216-031-00	METAL CHIP	180	5%	1/10W
R143	1-216-031-00	METAL CHIP	180	5%	1/10W
R144	1-216-031-00	METAL CHIP	180	5%	1/10W
R145	1-216-031-00	METAL CHIP	180	5%	1/10W
R146	1-216-031-00	METAL CHIP	180	5%	1/10W
R147	1-216-073-00	METAL CHIP	10K	5%	1/10W
R148	1-216-073-00	METAL CHIP	10K	5%	1/10W
R149	1-216-073-00	METAL CHIP	10K	5%	1/10W
R150	1-216-073-00	METAL CHIP	10K	5%	1/10W
R151	1-216-081-00	METAL CHIP	22K	5%	1/10W
R152	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R153	1-216-049-00	METAL CHIP	1K	5%	1/10W
R154	1-216-049-00	METAL CHIP	1K	5%	1/10W
R155	1-216-049-00	METAL CHIP	1K	5%	1/10W
R156	1-216-049-00	METAL CHIP	1K	5%	1/10W
R157	1-216-081-00	METAL CHIP	22K	5%	1/10W
R158	1-216-049-00	METAL CHIP	1K	5%	1/10W
R159	1-216-031-00	METAL CHIP	180	5%	1/10W
R160	1-216-031-00	METAL CHIP	180	5%	1/10W
R161	1-216-031-00	METAL CHIP	180	5%	1/10W
		< VIBRATOR >			
X100	1-577-213-11	VIBRATOR, CRYSTAL			
**********					
*	A-7066-123-A	MJ-65 BOARD, COMPLETE			
		**********			
		(Ref. No. 3,000 Seriese)			
	3-684-465-01	NUT, HEXAGON			
		< CAPACITOR >			
C081	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C083	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C084	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C085	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C086	1-126-193-11	ELECT	1uF	20%	50V
C087	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C088	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< DIODE >			
D081	8-719-801-78	DIODE 1SS184			
D082	8-719-801-78	DIODE 1SS184			
		< IC >			
IC081	8-759-266-09	IC NJM4562M(TE2) (MIC AMP)			

Ref. No.	Part No.	Description			Remarks
		< JACK >			
J081	1-507-932-11	JACK, LARGE TYPE (MIC)			
		< TRANSISTOR >			
Q081	8-729-216-22	TRANSISTOR 2SA1162-G			
Q082	8-729-202-38	TRANSISTOR 2SC3326N-A			
Q083	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
		< RESISTOR >			
R081	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R082	1-216-042-00	METAL CHIP	510	5%	1/10W
R083	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R084	1-216-080-00	METAL CHIP	20K	5%	1/10W
R085	1-216-075-00	METAL CHIP	12K	5%	1/10W
R087	1-216-109-00	METAL CHIP	330K	5%	1/10W
R088	1-216-075-00	METAL CHIP	12K	5%	1/10W
R089	1-216-079-00	METAL CHIP	18K	5%	1/10W
R090	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R091	1-216-075-00	METAL CHIP	12K	5%	1/10W
R092	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
**********					
*	A-7066-127-A	MM-27 (P) BOARD, COMPLETE			
		**********			
		(Ref. No. 5,000 Seriese)			
		< CAPACITOR >			
C001	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C002	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C101	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C102	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C103	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C104	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C105	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C106	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C107	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C108	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C121	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C122	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C123	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C124	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C125	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C126	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C127	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C131	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C132	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C133	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C134	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C135	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C136	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C137	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C138	1-126-193-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remarks
C139	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C140	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C141	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C142	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C143	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C144	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C145	1-164-699-11	CERAMIC CHIP	0.0033uF	5%	50V
C146	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C147	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C148	1-164-237-11	CERAMIC CHIP	16PF	5%	50V
C151	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C152	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C153	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C154	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C155	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C171	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C172	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C173	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C175	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C176	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C177	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C181	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C182	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C183	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C184	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C185	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C186	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C187	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C188	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C201	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C202	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C205	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C211	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C212	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C213	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C214	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C215	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C221	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C222	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C223	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C224	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C225	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C231	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C232	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C301	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C302	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C303	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C304	1-164-156-11	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remarks
C306	1-164-155-11	CERAMIC CHIP	75PF	5%	50V
C331	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C332	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C351	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C352	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C370	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C371	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C372	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C373	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C374	1-164-378-11	CERAMIC CHIP	30PF	5%	50V
C375	1-164-378-11	CERAMIC CHIP	30PF	5%	50V
C376	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C377	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C401	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C402	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C403	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C404	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C405	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C421	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C422	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C423	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C424	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C425	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C426	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C451	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C452	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C453	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C454	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C455	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C456	1-126-193-11	ELECT	1uF	20%	50V
C457	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C458	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C459	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C460	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C461	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C462	1-164-699-11	CERAMIC CHIP	0.0033uF	5%	50V
C463	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
C464	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C465	1-164-237-11	CERAMIC CHIP	16PF	5%	50V
C466	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C467	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C471	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C472	1-164-156-11	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

CN101	1-580-722-11	CONNECTOR, BOARD TO BOARD 28P
CN201	1-580-722-11	CONNECTOR, BOARD TO BOARD 28P

< VARIABLE CAPACITOR >

CV131	1-141-423-61	CAP, ADJ 20P
CV171	1-141-424-11	CAP, ADJ 30P

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D131	8-719-988-40	DIODE HVR17TRF	
D171	8-719-988-40	DIODE HVR17TRF	
D181	8-719-104-34	DIODE 1S2836	
D371	8-719-988-40	DIODE HVR17TRF	
D451	8-719-988-40	DIODE HVR17TRF	
		< FERRITE BEAD >	
FB010	1-412-390-21	INDUCTOR CHIP 0uH	
FB011	1-412-390-21	INDUCTOR CHIP 0uH	
FB012	1-412-390-21	INDUCTOR CHIP 0uH	
FB013	1-412-390-21	INDUCTOR CHIP 0uH	
FB014	1-412-390-21	INDUCTOR CHIP 0uH	
FB015	1-412-390-21	INDUCTOR CHIP 0uH	
FB016	1-412-390-21	INDUCTOR CHIP 0uH	
FB017	1-412-390-21	INDUCTOR CHIP 0uH	
FB018	1-412-390-21	INDUCTOR CHIP 0uH	
FB019	1-412-390-21	INDUCTOR CHIP 0uH	
FB020	1-412-390-21	INDUCTOR CHIP 0uH	
FB021	1-412-390-21	INDUCTOR CHIP 0uH	
FB022	1-412-390-21	INDUCTOR CHIP 0uH	
FB023	1-412-390-21	INDUCTOR CHIP 0uH	
FB024	1-412-390-21	INDUCTOR CHIP 0uH	
FB025	1-412-390-21	INDUCTOR CHIP 0uH	
FB026	1-412-390-21	INDUCTOR CHIP 0uH	
FB027	1-412-390-21	INDUCTOR CHIP 0uH	
FB028	1-412-390-21	INDUCTOR CHIP 0uH	
FB029	1-412-390-21	INDUCTOR CHIP 0uH	
FB030	1-412-390-21	INDUCTOR CHIP 0uH	
FB031	1-412-390-21	INDUCTOR CHIP 0uH	
FB051	1-412-390-21	INDUCTOR CHIP 0uH	
FB052	1-412-390-21	INDUCTOR CHIP 0uH	
FB053	1-412-390-21	INDUCTOR CHIP 0uH	
FB054	1-412-390-21	INDUCTOR CHIP 0uH	
FB055	1-412-390-21	INDUCTOR CHIP 0uH	
FB056	1-412-390-21	INDUCTOR CHIP 0uH	
FB057	1-412-390-21	INDUCTOR CHIP 0uH	
FB058	1-412-390-21	INDUCTOR CHIP 0uH	
FB059	1-412-390-21	INDUCTOR CHIP 0uH	
FB060	1-412-390-21	INDUCTOR CHIP 0uH	
FB061	1-412-390-21	INDUCTOR CHIP 0uH	
FB062	1-412-390-21	INDUCTOR CHIP 0uH	
FB063	1-412-390-21	INDUCTOR CHIP 0uH	
FB064	1-412-390-21	INDUCTOR CHIP 0uH	
FB065	1-412-390-21	INDUCTOR CHIP 0uH	
FB066	1-412-390-21	INDUCTOR CHIP 0uH	
FB067	1-412-390-21	INDUCTOR CHIP 0uH	
FB068	1-412-390-21	INDUCTOR CHIP 0uH	
FB069	1-412-390-21	INDUCTOR CHIP 0uH	
FB070	1-412-390-21	INDUCTOR CHIP 0uH	
FB071	1-412-390-21	INDUCTOR CHIP 0uH	
FB072	1-412-390-21	INDUCTOR CHIP 0uH	
FB073	1-412-390-21	INDUCTOR CHIP 0uH	
FB074	1-412-390-21	INDUCTOR CHIP 0uH	
FB101	1-543-813-21	FILTER, EMI	
FB102	1-543-813-21	FILTER, EMI	
FB103	1-216-296-91	METAL GLAZE 0 5% 1/8W	
FB121	1-543-813-21	FILTER, EMI	
FB122	1-543-813-21	FILTER, EMI	
FB123	1-216-296-91	METAL GLAZE 0 5% 1/8W	
FB133	1-543-813-21	FILTER, EMI	
FB171	1-543-813-21	FILTER, EMI	
FB181	1-543-813-21	FILTER, EMI	
FB201	1-543-813-21	FILTER, EMI	
FB202	1-543-813-21	FILTER, EMI	
FB211	1-543-813-21	FILTER, EMI	
FB212	1-543-813-21	FILTER, EMI	
FB221	1-543-813-21	FILTER, EMI	
FB222	1-543-813-21	FILTER, EMI	
FB231	1-543-813-21	FILTER, EMI	
FB301	1-543-813-21	FILTER, EMI	
FB371	1-543-813-21	FILTER, EMI	
FB372	1-543-813-21	FILTER, EMI	
FB401	1-543-813-21	FILTER, EMI	
FB421	1-543-813-21	FILTER, EMI	
FB471	1-543-813-21	FILTER, EMI	
		< IC >	
IC101	8-752-334-55	IC CXD1175AM (Y A/D CONVERTER)	
IC121	8-752-334-55	IC CXD1175AM (C A/D CONVERTER)	
IC131	8-759-987-20	IC CXD1229Q (WRITE TIMING GEN)	
IC132	8-759-030-16	IC MC34182M (BUFFER)	
IC151	8-759-710-82	IC NJM2406F (CLAMP)	
IC152	8-759-907-81	IC SN74LS221NS (M.M)	
IC153	8-759-032-23	IC MC74HC74AF (LATCH)	
IC154	8-759-063-30	IC MC74HC374AF (LATCH)	
IC181	8-759-987-17	IC CXD1226Q (DIGITAL CHROMA DECODER /DIGITAL NOISE REDUCTION)	
IC201	8-752-340-75	IC CXK1206AM (RAM)	
IC202	8-752-340-75	IC CXK1206AM (RAM)	
IC211	8-752-340-75	IC CXK1206AM (RAM)	
IC212	8-752-340-75	IC CXK1206AM (RAM)	
IC221	8-752-340-75	IC CXK1206AM (RAM)	
IC222	8-752-340-75	IC CXK1206AM (RAM)	
IC301	8-759-089-60	IC MB87448A-003 (MEMORY CONTROLLER)	
IC302	8-759-032-20	IC MC74HC32AF (MUTE/PULSE GEN)	
IC303	8-759-180-86	IC TC7W74F-TE12L (MUTE/PULSE GEN)	
IC304	8-759-242-72	IC TC7W00F (MUTE/PULSE GEN)	

Ref. No.	Part No.	Description	Remarks
IC305	8-759-926-97	IC SN74HC4024NS (MUTE/PULSE GEN)	
IC331	8-759-191-44	IC MB623831 (GATE ARRAY)	
IC351	8-759-987-18	IC CXD1227Q (DIGITAL CHROMA ENCODER /SPECIAL EFFECTS GEN)	
IC353	8-759-035-93	IC SC7S32F (GATE)	
IC371	8-752-306-51	IC CX23065A (PHASE COMP)	
IC401	8-752-334-64	IC CXD1171M (Y D/A CONVERTER)	
IC421	8-752-334-64	IC CXD1171M (C D/A CONVERTER)	
IC451	8-759-987-20	IC CXD1229Q (READ TIMING GEN)	
IC452	8-759-035-93	IC SC7S32F (BUFFER)	
IC471	8-759-242-74	IC TC7W04F (INV)	
IC472	8-759-063-30	IC MC74HC374AF (D-LATCH)	
IC932	8-759-242-68	IC TC7W32F (INC MASK)	
IC933	8-759-242-76	IC TC7W08F (INC MASK)	
IC934	8-759-032-23	IC MC74HC74AF (INC MASK)	
		< COIL >	
L131	1-410-393-11	INDUCTOR CHIP 100uH	
L132	1-410-377-31	INDUCTOR CHIP 4.7uH	
L451	1-410-377-31	INDUCTOR CHIP 4.7uH	
		< TRANSISTOR >	
Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q131	8-729-216-22	TRANSISTOR 2SA1162-G	
Q171	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q371	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q401	8-729-216-22	TRANSISTOR 2SA1162-G	
Q421	8-729-216-22	TRANSISTOR 2SA1162-G	
		< RESISTOR >	
R101	1-218-845-11	METAL CHIP 820 0.50%	1/16W
R102	1-218-867-11	METAL CHIP 6.8K 0.50%	1/16W
R103	1-218-845-11	METAL CHIP 820 0.50%	1/16W
R104	1-216-811-11	METAL CHIP 150 5%	1/16W
R121	1-216-811-11	METAL CHIP 150 5%	1/16W
R122	1-216-833-11	METAL CHIP 10K 5%	1/16W
R123	1-216-833-11	METAL CHIP 10K 5%	1/16W
R131	1-216-821-11	METAL CHIP 1K 5%	1/16W
R132	1-216-821-11	METAL CHIP 1K 5%	1/16W
R133	1-216-821-11	METAL CHIP 1K 5%	1/16W
R134	1-216-821-11	METAL CHIP 1K 5%	1/16W
R135	1-218-853-11	METAL CHIP 1.8K 0.50%	1/16W
R136	1-216-855-11	METAL CHIP 680K 5%	1/16W
R137	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R138	1-216-804-11	METAL CHIP 39 5%	1/16W
R139	1-216-821-11	METAL CHIP 1K 5%	1/16W
R140	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R141	1-216-804-11	METAL CHIP 39 5%	1/16W
R142	1-216-821-11	METAL CHIP 1K 5%	1/16W
R143	1-216-833-11	METAL CHIP 10K 5%	1/16W

Ref. No.	Part No.	Description	Remarks
R144	1-216-809-11	METAL CHIP 100 5%	1/16W
R145	1-216-839-11	METAL CHIP 33K 5%	1/16W
R146	1-216-839-11	METAL CHIP 33K 5%	1/16W
R147	1-216-839-11	METAL CHIP 33K 5%	1/16W
R148	1-216-833-11	METAL CHIP 10K 5%	1/16W
R149	1-216-821-11	METAL CHIP 1K 5%	1/16W
R150	1-216-839-11	METAL CHIP 33K 5%	1/16W
R151	1-216-838-11	METAL CHIP 27K 5%	1/16W
R152	1-216-833-11	METAL CHIP 10K 5%	1/16W
R153	1-216-821-11	METAL CHIP 1K 5%	1/16W
R154	1-216-821-11	METAL CHIP 1K 5%	1/16W
R155	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R156	1-216-840-11	METAL CHIP 39K 5%	1/16W
R157	1-218-295-11	METAL GLAZE 43K 5%	1/16W
R171	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R172	1-216-837-11	METAL CHIP 22K 5%	1/16W
R173	1-216-839-11	METAL CHIP 33K 5%	1/16W
R174	1-216-839-11	METAL CHIP 33K 5%	1/16W
R175	1-216-809-11	METAL CHIP 100 5%	1/16W
R181	1-216-845-11	METAL CHIP 100K 5%	1/16W
R182	1-220-372-11	METAL GLAZE 200K 5%	1/16W
R183	1-216-852-11	METAL CHIP 390K 5%	1/16W
R184	1-216-856-11	METAL CHIP 820K 5%	1/16W
R185	1-216-857-11	METAL CHIP 1M 5%	1/16W
R186	1-216-833-11	METAL CHIP 10K 5%	1/16W
R187	1-216-857-11	METAL CHIP 1M 5%	1/16W
R188	1-216-845-11	METAL CHIP 100K 5%	1/16W
R189	1-220-372-11	METAL GLAZE 200K 5%	1/16W
R190	1-216-852-11	METAL CHIP 390K 5%	1/16W
R191	1-216-856-11	METAL CHIP 820K 5%	1/16W
R192	1-216-823-11	METAL CHIP 1.5K 5%	1/16W
R193	1-216-809-11	METAL CHIP 100 5%	1/16W
R194	1-216-809-11	METAL CHIP 100 5%	1/16W
R197	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
R198	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
R302	1-216-833-11	METAL CHIP 10K 5%	1/16W
R303	1-216-833-11	METAL CHIP 10K 5%	1/16W
R304	1-216-833-11	METAL CHIP 10K 5%	1/16W
R305	1-216-864-11	METAL CHIP 0 5%	1/16W
R306	1-216-845-11	METAL CHIP 100K 5%	1/16W
R307	1-216-845-11	METAL CHIP 100K 5%	1/16W
R308	1-216-845-11	METAL CHIP 100K 5%	1/16W
R309	1-216-845-11	METAL CHIP 100K 5%	1/16W
R310	1-216-845-11	METAL CHIP 100K 5%	1/16W
R311	1-216-833-11	METAL CHIP 10K 5%	1/16W
R314	1-216-864-11	METAL CHIP 0 5%	1/16W
R315	1-216-864-11	METAL CHIP 0 5%	1/16W
R318	1-216-864-11	METAL CHIP 0 5%	1/16W
R321	1-216-845-11	METAL CHIP 100K 5%	1/16W
R322	1-216-845-11	METAL CHIP 100K 5%	1/16W

Ref. No.	Part No.	Description			Remarks
R323	1-216-845-11	METAL CHIP	100K	5%	1/16W
R324	1-216-845-11	METAL CHIP	100K	5%	1/16W
R331	1-216-845-11	METAL CHIP	100K	5%	1/16W
R333	1-216-864-11	METAL CHIP	0	5%	1/16W
R351	1-216-833-11	METAL CHIP	10K	5%	1/16W
R352	1-216-857-11	METAL CHIP	1M	5%	1/16W
R370	1-216-833-11	METAL CHIP	10K	5%	1/16W
R371	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R372	1-216-839-11	METAL CHIP	33K	5%	1/16W
R373	1-216-839-11	METAL CHIP	33K	5%	1/16W
R374	1-216-840-11	METAL CHIP	39K	5%	1/16W
R375	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R401	1-216-809-11	METAL CHIP	100	5%	1/16W
R402	1-216-809-11	METAL CHIP	100	5%	1/16W
R403	1-216-809-11	METAL CHIP	100	5%	1/16W
R404	1-216-809-11	METAL CHIP	100	5%	1/16W
R405	1-216-809-11	METAL CHIP	100	5%	1/16W
R406	1-216-809-11	METAL CHIP	100	5%	1/16W
R407	1-216-809-11	METAL CHIP	100	5%	1/16W
R408	1-216-809-11	METAL CHIP	100	5%	1/16W
R409	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W
R410	1-218-831-11	METAL GLAZE	220	0.50%	1/16W
R411	1-218-831-11	METAL GLAZE	220	0.50%	1/16W
R412	1-216-816-11	METAL CHIP	390	5%	1/16W
R421	1-216-809-11	METAL CHIP	100	5%	1/16W
R422	1-216-809-11	METAL CHIP	100	5%	1/16W
R423	1-216-809-11	METAL CHIP	100	5%	1/16W
R424	1-216-809-11	METAL CHIP	100	5%	1/16W
R425	1-216-809-11	METAL CHIP	100	5%	1/16W
R426	1-216-809-11	METAL CHIP	100	5%	1/16W
R427	1-216-809-11	METAL CHIP	100	5%	1/16W
R428	1-216-809-11	METAL CHIP	100	5%	1/16W
R429	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W
R430	1-218-831-11	METAL GLAZE	220	0.50%	1/16W
R431	1-218-831-11	METAL GLAZE	220	0.50%	1/16W
R432	1-216-816-11	METAL CHIP	390	5%	1/16W
R451	1-218-844-11	METAL CHIP	750	0.50%	1/16W
R452	1-216-855-11	METAL CHIP	680K	5%	1/16W
R453	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R454	1-216-807-11	METAL CHIP	68	5%	1/16W
R455	1-216-821-11	METAL CHIP	1K	5%	1/16W
R456	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R457	1-216-806-11	METAL GLAZE	56	5%	1/16W
R458	1-216-821-11	METAL CHIP	1K	5%	1/16W
R459	1-216-833-11	METAL CHIP	10K	5%	1/16W
R461	1-216-833-11	METAL CHIP	10K	5%	1/16W
R462	1-216-821-11	METAL CHIP	1K	5%	1/16W
R463	1-216-839-11	METAL CHIP	33K	5%	1/16W
R464	1-216-839-11	METAL CHIP	33K	5%	1/16W
R465	1-216-839-11	METAL CHIP	33K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R466	1-216-833-11	METAL CHIP	10K	5%	1/16W
R467	1-216-821-11	METAL CHIP	1K	5%	1/16W
R469	1-216-864-11	METAL CHIP	0	5%	1/16W
R475	1-216-864-11	METAL CHIP	0	5%	1/16W

< VIBRATOR >

X171	1-579-780-21	VIBRATOR, CRYSTAL 14.31 MHz
X371	1-579-780-21	VIBRATOR, CRYSTAL 14.31 MHz

****

* A-7053-847-A RE-25 BOARD, COMPLETE

****

(Ref.No. 3,000 Seriese)

1-751-560-11 CABLE, FLAT (FAI-1)
1-751-561-11 CABLE, FLAT (FAO-1)

< CAPACITOR >

C301	1-126-204-11	ELECT CHIP	47uF	20%	16V
C302	1-126-204-11	ELECT CHIP	47uF	20%	16V
C304	1-126-400-11	ELECT	22uF	20%	35V
C305	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C306	1-126-204-11	ELECT CHIP	47uF	20%	16V
C307	1-126-204-11	ELECT CHIP	47uF	20%	16V
C309	1-126-400-11	ELECT	22uF	20%	35V
C310	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C311	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C312	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C313	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C314	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C315	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C316	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C317	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C318	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C319	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C321	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C322	1-126-400-11	ELECT	22uF	20%	35V
C323	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C324	1-126-400-11	ELECT	22uF	20%	35V
C325	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C326	1-126-400-11	ELECT	22uF	20%	35V
C327	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C328	1-126-400-11	ELECT	22uF	20%	35V
C329	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C330	1-126-400-11	ELECT	22uF	20%	35V
C331	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C332	1-126-400-11	ELECT	22uF	20%	35V
C333	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C334	1-126-400-11	ELECT	22uF	20%	35V
C335	1-126-204-11	ELECT CHIP	47uF	20%	16V
C336	1-126-204-11	ELECT CHIP	47uF	20%	16V
C337	1-126-204-11	ELECT CHIP	47uF	20%	16V
C338	1-126-204-11	ELECT CHIP	47uF	20%	16V

Ref. No.	Part No.	Description				Remarks
C339	1-126-204-11	ELECT CHIP	47uF	20%	16V	
C340	1-126-204-11	ELECT CHIP	47uF	20%	16V	
C404	1-126-400-11	ELECT	22uF	20%	35V	
C405	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C406	1-126-204-11	ELECT CHIP	47uF	20%	16V	
C407	1-126-204-11	ELECT CHIP	47uF	20%	16V	
C409	1-126-400-11	ELECT	22uF	20%	35V	
C410	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C411	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C421	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C422	1-126-400-11	ELECT	22uF	20%	35V	
C423	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C424	1-126-400-11	ELECT	22uF	20%	35V	
C425	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C426	1-126-400-11	ELECT	22uF	20%	35V	
C427	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C428	1-126-400-11	ELECT	22uF	20%	35V	
C429	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C430	1-126-400-11	ELECT	22uF	20%	35V	
C431	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C432	1-126-400-11	ELECT	22uF	20%	35V	
C433	1-163-025-11	CERAMIC CHIP	0.001uF		50V	
C434	1-126-400-11	ELECT	22uF	20%	35V	
		< CONNECTOR >				
CN301	1-566-532-11	CONNECTOR, FPC (ZIF) 16P				
CN302	1-568-207-11	CONNECTOR, FPC (ZIF) 23P				
CN303	1-506-479-11	PIN, CONNECTOR 14P				
CN304	1-506-477-11	PIN, CONNECTOR 12P				
* CN305	1-564-009-11	PIN, CONNECTOR 10P				
CN306	1-506-471-11	PIN, CONNECTOR 6P				
CN307	1-506-471-11	PIN, CONNECTOR 6P				
		< DIODE >				
D301	8-719-107-15	DIODE	RD18M-B2			
D302	8-719-107-15	DIODE	RD18M-B2			
D303	8-719-107-15	DIODE	RD18M-B2			
D304	8-719-107-15	DIODE	RD18M-B2			
D305	8-719-107-15	DIODE	RD18M-B2			
D306	8-719-107-15	DIODE	RD18M-B2			
D311	8-719-107-15	DIODE	RD18M-B2			
D312	8-719-107-15	DIODE	RD18M-B2			
D313	8-719-107-15	DIODE	RD18M-B2			
D314	8-719-107-15	DIODE	RD18M-B2			
D315	8-719-107-15	DIODE	RD18M-B2			
D316	8-719-107-15	DIODE	RD18M-B2			
D317	8-719-107-15	DIODE	RD18M-B2			
D318	8-719-107-15	DIODE	RD18M-B2			
D319	8-719-107-15	DIODE	RD18M-B2			

Ref. No.	Part No.	Description		Remarks
D320	8-719-107-15	DIODE	RD18M-B2	
D321	8-719-107-15	DIODE	RD18M-B2	
D322	8-719-107-15	DIODE	RD18M-B2	
D323	8-719-107-15	DIODE	RD18M-B2	
D324	8-719-107-15	DIODE	RD18M-B2	
D331	8-719-106-80	DIODE	RD13M-B2	
D332	8-719-106-80	DIODE	RD13M-B2	
D333	8-719-106-80	DIODE	RD13M-B2	
D334	8-719-106-80	DIODE	RD13M-B2	
D335	8-719-106-80	DIODE	RD13M-B2	
D336	8-719-106-80	DIODE	RD13M-B2	
D337	8-719-106-80	DIODE	RD13M-B2	
D338	8-719-106-80	DIODE	RD13M-B2	
D339	8-719-106-80	DIODE	RD13M-B2	
D340	8-719-106-80	DIODE	RD13M-B2	
D341	8-719-106-80	DIODE	RD13M-B2	
D342	8-719-106-80	DIODE	RD13M-B2	
D343	8-719-106-80	DIODE	RD13M-B2	
D344	8-719-106-80	DIODE	RD13M-B2	
D345	8-719-106-80	DIODE	RD13M-B2	
D346	8-719-106-80	DIODE	RD13M-B2	
D347	8-719-106-80	DIODE	RD13M-B2	
D348	8-719-106-80	DIODE	RD13M-B2	
D349	8-719-106-80	DIODE	RD13M-B2	
D350	8-719-106-80	DIODE	RD13M-B2	
D351	8-719-106-80	DIODE	RD13M-B2	
D352	8-719-106-80	DIODE	RD13M-B2	
D361	8-719-106-80	DIODE	RD13M-B2	
D362	8-719-106-80	DIODE	RD13M-B2	
D363	8-719-106-80	DIODE	RD13M-B2	
D364	8-719-106-80	DIODE	RD13M-B2	
D365	8-719-106-80	DIODE	RD13M-B2	
D366	8-719-106-80	DIODE	RD13M-B2	
D367	8-719-106-80	DIODE	RD13M-B2	
D368	8-719-106-80	DIODE	RD13M-B2	
D369	8-719-106-80	DIODE	RD13M-B2	
D370	8-719-106-80	DIODE	RD13M-B2	
D371	8-719-106-80	DIODE	RD13M-B2	
D372	8-719-106-80	DIODE	RD13M-B2	
D373	8-719-106-80	DIODE	RD13M-B2	
D374	8-719-106-80	DIODE	RD13M-B2	
D375	8-719-106-80	DIODE	RD13M-B2	
D376	8-719-106-80	DIODE	RD13M-B2	
D377	8-719-106-80	DIODE	RD13M-B2	
D378	8-719-106-80	DIODE	RD13M-B2	
D379	8-719-106-80	DIODE	RD13M-B2	
D380	8-719-106-80	DIODE	RD13M-B2	
D381	8-719-106-80	DIODE	RD13M-B2	
D382	8-719-106-80	DIODE	RD13M-B2	
D383	8-719-106-80	DIODE	RD13M-B2	

Ref. No.	Part No.	Description	Remarks
D384	8-719-106-80	DIODE RD13M-B2	
D391	8-719-106-80	DIODE RD13M-B2	
D392	8-719-106-80	DIODE RD13M-B2	
D393	8-719-106-80	DIODE RD13M-B2	
D394	8-719-106-80	DIODE RD13M-B2	
D395	8-719-106-80	DIODE RD13M-B2	
D396	8-719-106-80	DIODE RD13M-B2	
D401	8-719-107-15	DIODE RD18M-B2	
D402	8-719-107-15	DIODE RD18M-B2	
D403	8-719-107-15	DIODE RD18M-B2	
D404	8-719-107-15	DIODE RD18M-B2	
D405	8-719-107-15	DIODE RD18M-B2	
D406	8-719-107-15	DIODE RD18M-B2	
D411	8-719-107-15	DIODE RD18M-B2	
D412	8-719-107-15	DIODE RD18M-B2	
D413	8-719-107-15	DIODE RD18M-B2	
D414	8-719-107-15	DIODE RD18M-B2	
D415	8-719-107-15	DIODE RD18M-B2	
D416	8-719-107-15	DIODE RD18M-B2	
D417	8-719-107-15	DIODE RD18M-B2	
D418	8-719-107-15	DIODE RD18M-B2	
D419	8-719-107-15	DIODE RD18M-B2	
D420	8-719-107-15	DIODE RD18M-B2	
D421	8-719-107-15	DIODE RD18M-B2	
D422	8-719-107-15	DIODE RD18M-B2	
D423	8-719-107-15	DIODE RD18M-B2	
D424	8-719-107-15	DIODE RD18M-B2	
		< FERRITE BEAD >	
FB301	1-412-390-21	INDUCTOR CHIP 0uH	
FB302	1-412-390-21	INDUCTOR CHIP 0uH	
FB303	1-412-390-21	INDUCTOR CHIP 0uH	
FB311	1-412-390-21	INDUCTOR CHIP 0uH	
FB312	1-412-390-21	INDUCTOR CHIP 0uH	
FB313	1-412-390-21	INDUCTOR CHIP 0uH	
FB314	1-412-390-21	INDUCTOR CHIP 0uH	
FB315	1-412-390-21	INDUCTOR CHIP 0uH	
FB316	1-412-390-21	INDUCTOR CHIP 0uH	
FB317	1-412-390-21	INDUCTOR CHIP 0uH	
FB321	1-412-390-21	INDUCTOR CHIP 0uH	
FB324	1-412-390-21	INDUCTOR CHIP 0uH	
FB325	1-412-390-21	INDUCTOR CHIP 0uH	
FB328	1-412-390-21	INDUCTOR CHIP 0uH	
FB329	1-412-390-21	INDUCTOR CHIP 0uH	
FB330	1-412-390-21	INDUCTOR CHIP 0uH	
FB331	1-412-390-21	INDUCTOR CHIP 0uH	
FB332	1-412-390-21	INDUCTOR CHIP 0uH	
FB333	1-412-390-21	INDUCTOR CHIP 0uH	
FB334	1-412-390-21	INDUCTOR CHIP 0uH	
FB335	1-412-390-21	INDUCTOR CHIP 0uH	
FB341	1-412-390-21	INDUCTOR CHIP 0uH	
FB344	1-412-390-21	INDUCTOR CHIP 0uH	
FB345	1-412-390-21	INDUCTOR CHIP 0uH	
FB348	1-412-390-21	INDUCTOR CHIP 0uH	
FB349	1-412-390-21	INDUCTOR CHIP 0uH	
FB352	1-412-390-21	INDUCTOR CHIP 0uH	
FB353	1-412-390-21	INDUCTOR CHIP 0uH	
FB356	1-412-390-21	INDUCTOR CHIP 0uH	
FB357	1-412-390-21	INDUCTOR CHIP 0uH	
FB358	1-412-390-21	INDUCTOR CHIP 0uH	
FB359	1-412-390-21	INDUCTOR CHIP 0uH	
FB360	1-412-390-21	INDUCTOR CHIP 0uH	
FB361	1-412-390-21	INDUCTOR CHIP 0uH	
FB362	1-412-390-21	INDUCTOR CHIP 0uH	
FB363	1-412-390-21	INDUCTOR CHIP 0uH	
FB364	1-412-390-21	INDUCTOR CHIP 0uH	
FB401	1-412-390-21	INDUCTOR CHIP 0uH	
FB402	1-412-390-21	INDUCTOR CHIP 0uH	
FB403	1-412-390-21	INDUCTOR CHIP 0uH	
FB411	1-412-390-21	INDUCTOR CHIP 0uH	
FB412	1-412-390-21	INDUCTOR CHIP 0uH	
FB413	1-412-390-21	INDUCTOR CHIP 0uH	
FB414	1-412-390-21	INDUCTOR CHIP 0uH	
FB415	1-412-390-21	INDUCTOR CHIP 0uH	
FB416	1-412-390-21	INDUCTOR CHIP 0uH	
FB417	1-412-390-21	INDUCTOR CHIP 0uH	
		< IC >	
IC301	8-759-981-86	IC RC4556MA (AMP)	
IC302	8-759-100-96	IC uPC4558G2 (BUFFER AMP)	
IC303	8-759-100-96	IC uPC4558G2 (BUFFER AMP)	
IC304	8-759-100-96	IC uPC4558G2 (BUFFER AMP)	
IC305	8-759-100-96	IC uPC4558G2 (BUFFER AMP)	
IC306	8-759-100-96	IC uPC4558G2 (BUFFER AMP)	
IC401	8-759-981-86	IC RC4556MA (AMP)	
IC402	8-759-100-96	IC uPC4558G2 (BUFFER AMP)	
IC403	8-759-100-96	IC uPC4558G2 (BUFFER AMP)	
		< JACK >	
* J301	1-537-606-11	TERMINAL BOARD (PLAYER 1/2)	
* J302	1-537-606-21	TERMINAL BOARD (AUX 1/2 RECORDER/PGM 1)	
* J303	1-537-607-11	TERMINAL BOARD (PGM 2/MONITOR)	
* J304	1-764-066-11	CONNECTOR, BNC (BB OUT)	
* J305	1-764-066-11	CONNECTOR, BNC (BB OUT)	
* J306	1-764-066-11	CONNECTOR, BNC (GPI OUT)	
* J307	1-764-067-11	CONNECTOR, BNC (GPI IN)	

RE-25

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q301	8-729-202-38	TRANSISTOR	2SC3326N-A		
Q302	8-729-202-38	TRANSISTOR	2SC3326N-A		
Q303	8-729-202-38	TRANSISTOR	2SC3326N-A		
Q304	8-729-202-38	TRANSISTOR	2SC3326N-A		
Q401	8-729-202-38	TRANSISTOR	2SC3326N-A		
Q402	8-729-202-38	TRANSISTOR	2SC3326N-A		
Q403	8-729-202-38	TRANSISTOR	2SC3326N-A		
Q404	8-729-202-38	TRANSISTOR	2SC3326N-A		
		< RESISTOR >			
R301	1-216-049-00	METAL CHIP	1K	5%	1/10W
R302	1-216-105-00	METAL CHIP	220K	5%	1/10W
R303	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R304	1-216-075-00	METAL CHIP	12K	5%	1/10W
R305	1-216-043-00	METAL CHIP	560	5%	1/10W
R306	1-216-073-00	METAL CHIP	10K	5%	1/10W
R307	1-216-043-00	METAL CHIP	560	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R309	1-216-097-00	METAL CHIP	100K	5%	1/10W
R311	1-216-105-00	METAL CHIP	220K	5%	1/10W
R312	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R313	1-216-075-00	METAL CHIP	12K	5%	1/10W
R314	1-216-043-00	METAL CHIP	560	5%	1/10W
R315	1-216-073-00	METAL CHIP	10K	5%	1/10W
R316	1-216-043-00	METAL CHIP	560	5%	1/10W
R317	1-216-073-00	METAL CHIP	10K	5%	1/10W
R318	1-216-097-00	METAL CHIP	100K	5%	1/10W
R321	1-216-105-00	METAL CHIP	220K	5%	1/10W
R322	1-216-041-00	METAL CHIP	470	5%	1/10W
R323	1-216-031-00	METAL CHIP	180	5%	1/10W
R324	1-216-025-00	METAL CHIP	100	5%	1/10W
R325	1-216-105-00	METAL CHIP	220K	5%	1/10W
R326	1-216-041-00	METAL CHIP	470	5%	1/10W
R327	1-216-031-00	METAL CHIP	180	5%	1/10W
R328	1-216-025-00	METAL CHIP	100	5%	1/10W
R329	1-216-105-00	METAL CHIP	220K	5%	1/10W
R330	1-216-041-00	METAL CHIP	470	5%	1/10W
R331	1-216-031-00	METAL CHIP	180	5%	1/10W
R332	1-216-025-00	METAL CHIP	100	5%	1/10W
R333	1-216-105-00	METAL CHIP	220K	5%	1/10W
R334	1-216-041-00	METAL CHIP	470	5%	1/10W
R335	1-216-031-00	METAL CHIP	180	5%	1/10W
R336	1-216-025-00	METAL CHIP	100	5%	1/10W
R337	1-216-105-00	METAL CHIP	220K	5%	1/10W
R338	1-216-041-00	METAL CHIP	470	5%	1/10W
R339	1-216-031-00	METAL CHIP	180	5%	1/10W
R340	1-216-025-00	METAL CHIP	100	5%	1/10W
R341	1-216-105-00	METAL CHIP	220K	5%	1/10W
R342	1-216-041-00	METAL CHIP	470	5%	1/10W
R343	1-216-031-00	METAL CHIP	180	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R344	1-216-025-00	METAL CHIP	100	5%	1/10W
R345	1-216-105-00	METAL CHIP	220K	5%	1/10W
R346	1-216-041-00	METAL CHIP	470	5%	1/10W
R347	1-216-031-00	METAL CHIP	180	5%	1/10W
R348	1-216-025-00	METAL CHIP	100	5%	1/10W
R349	1-216-105-00	METAL CHIP	220K	5%	1/10W
R350	1-216-105-00	METAL CHIP	220K	5%	1/10W
R351	1-216-105-00	METAL CHIP	220K	5%	1/10W
R352	1-216-105-00	METAL CHIP	220K	5%	1/10W
R353	1-216-105-00	METAL CHIP	220K	5%	1/10W
R354	1-216-105-00	METAL CHIP	220K	5%	1/10W
R355	1-216-105-00	METAL CHIP	220K	5%	1/10W
R390	1-216-045-00	METAL CHIP	680	5%	1/10W
R391	1-216-045-00	METAL CHIP	680	5%	1/10W
R392	1-216-045-00	METAL CHIP	680	5%	1/10W
R393	1-216-045-00	METAL CHIP	680	5%	1/10W
R394	1-216-045-00	METAL CHIP	680	5%	1/10W
R395	1-216-045-00	METAL CHIP	680	5%	1/10W
R396	1-216-045-00	METAL CHIP	680	5%	1/10W
R397	1-216-045-00	METAL CHIP	680	5%	1/10W
R401	1-216-049-00	METAL CHIP	1K	5%	1/10W
R402	1-216-105-00	METAL CHIP	220K	5%	1/10W
R403	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R404	1-216-075-00	METAL CHIP	12K	5%	1/10W
R405	1-216-043-00	METAL CHIP	560	5%	1/10W
R406	1-216-073-00	METAL CHIP	10K	5%	1/10W
R407	1-216-043-00	METAL CHIP	560	5%	1/10W
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R409	1-216-097-00	METAL CHIP	100K	5%	1/10W
R411	1-216-105-00	METAL CHIP	220K	5%	1/10W
R412	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R413	1-216-075-00	METAL CHIP	12K	5%	1/10W
R414	1-216-043-00	METAL CHIP	560	5%	1/10W
R415	1-216-073-00	METAL CHIP	10K	5%	1/10W
R416	1-216-043-00	METAL CHIP	560	5%	1/10W
R417	1-216-073-00	METAL CHIP	10K	5%	1/10W
R418	1-216-097-00	METAL CHIP	100K	5%	1/10W
R421	1-216-031-00	METAL CHIP	180	5%	1/10W
R422	1-216-041-00	METAL CHIP	470	5%	1/10W
R423	1-216-105-00	METAL CHIP	220K	5%	1/10W
R424	1-216-025-00	METAL CHIP	100	5%	1/10W
R425	1-216-031-00	METAL CHIP	180	5%	1/10W
R426	1-216-041-00	METAL CHIP	470	5%	1/10W
R427	1-216-105-00	METAL CHIP	220K	5%	1/10W
R428	1-216-025-00	METAL CHIP	100	5%	1/10W
R429	1-216-031-00	METAL CHIP	180	5%	1/10W
R430	1-216-041-00	METAL CHIP	470	5%	1/10W
R431	1-216-105-00	METAL CHIP	220K	5%	1/10W
R432	1-216-025-00	METAL CHIP	100	5%	1/10W
R433	1-216-031-00	METAL CHIP	180	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R434	1-216-041-00	METAL CHIP	470	5%	1/10W
R435	1-216-105-00	METAL CHIP	220K	5%	1/10W
R436	1-216-025-00	METAL CHIP	100	5%	1/10W
R437	1-216-031-00	METAL CHIP	180	5%	1/10W
R438	1-216-041-00	METAL CHIP	470	5%	1/10W
R439	1-216-105-00	METAL CHIP	220K	5%	1/10W
R440	1-216-025-00	METAL CHIP	100	5%	1/10W
R441	1-216-031-00	METAL CHIP	180	5%	1/10W
R442	1-216-041-00	METAL CHIP	470	5%	1/10W
R443	1-216-105-00	METAL CHIP	220K	5%	1/10W
R444	1-216-025-00	METAL CHIP	100	5%	1/10W
R445	1-216-031-00	METAL CHIP	180	5%	1/10W
R446	1-216-041-00	METAL CHIP	470	5%	1/10W
R447	1-216-105-00	METAL CHIP	220K	5%	1/10W
R448	1-216-025-00	METAL CHIP	100	5%	1/10W
R449	1-216-105-00	METAL CHIP	220K	5%	1/10W
R450	1-216-105-00	METAL CHIP	220K	5%	1/10W
R451	1-216-105-00	METAL CHIP	220K	5%	1/10W
R452	1-216-105-00	METAL CHIP	220K	5%	1/10W
R453	1-216-105-00	METAL CHIP	220K	5%	1/10W
R454	1-216-105-00	METAL CHIP	220K	5%	1/10W
R455	1-216-105-00	METAL CHIP	220K	5%	1/10W

< SWITCH >

S301	1-571-640-21	SWITCH, SLIDE (PGM 1)
S302	1-571-640-21	SWITCH, SLIDE (PGM 2)
S311	1-571-640-21	SWITCH, SLIDE (PLAYER 1)
S312	1-571-640-21	SWITCH, SLIDE (PLAYER 1)
S313	1-571-640-21	SWITCH, SLIDE (PLAYER 2)
S314	1-571-640-21	SWITCH, SLIDE (PLAYER 2)
S315	1-571-640-21	SWITCH, SLIDE (AUX 1)
S316	1-571-640-21	SWITCH, SLIDE (AUX 2)
S317	1-571-640-21	SWITCH, SLIDE (RECORDER)

****

* A-7066-124-A RS-62 BOARD, COMPLETE

****

(Ref. No. 4,000 Seriese)

< CAPACITOR >

C201	1-164-346-11	CERAMIC CHIP	1uF	16V
C202	1-164-346-11	CERAMIC CHIP	1uF	16V
C203	1-164-346-11	CERAMIC CHIP	1uF	16V
C204	1-164-346-11	CERAMIC CHIP	1uF	16V
C206	1-164-346-11	CERAMIC CHIP	1uF	16V
C208	1-164-346-11	CERAMIC CHIP	1uF	16V
C209	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C210	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C211	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C220	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C221	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C222	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C223	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C224	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C225	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C226	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C227	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C228	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C229	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C230	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C231	1-164-505-11	CERAMIC CHIP	2.2uF	16V

< CONNECTOR >

* CN201	1-569-035-11	CONNECTOR, FPC (ZIF) 30P
CN251	1-565-388-21	CONNECTOR, D-SUB 9P (1-PLAYER REMOTE-2 RS-232C)
CN252	1-565-388-21	CONNECTOR, D-SUB 9P (1-PLAYER REMOTE-2 RS-232C)
CN253	1-565-388-21	CONNECTOR, D-SUB 9P (RECORDER REMOTE RS-232C)
CN254	1-573-005-21	CONNECTOR, D-SUB 9P (1-PLAYER REMOTE-2 RS-422)
CN255	1-573-005-21	CONNECTOR, D-SUB 9P (1-PLAYER REMOTE-2 RS-422)
CN256	1-573-005-21	CONNECTOR, D-SUB 9P (RECORDER REMOTE RS-422)
CN265	1-506-486-11	PIN, CONNECTOR 7P

< DIODE >

D202	8-719-107-15	DIODE	RD18M-B2
D204	8-719-107-15	DIODE	RD18M-B2
D206	8-719-107-15	DIODE	RD18M-B2
D208	8-719-107-15	DIODE	RD18M-B2
D210	8-719-107-15	DIODE	RD18M-B2
D212	8-719-107-15	DIODE	RD18M-B2
D214	8-719-107-15	DIODE	RD18M-B2
D216	8-719-107-15	DIODE	RD18M-B2
D218	8-719-107-15	DIODE	RD18M-B2
D220	8-719-107-15	DIODE	RD18M-B2
D222	8-719-107-15	DIODE	RD18M-B2
D224	8-719-107-15	DIODE	RD18M-B2
D226	8-719-107-15	DIODE	RD18M-B2
D228	8-719-107-15	DIODE	RD18M-B2
D230	8-719-107-15	DIODE	RD18M-B2
D232	8-719-107-15	DIODE	RD18M-B2
D234	8-719-107-15	DIODE	RD18M-B2
D236	8-719-107-15	DIODE	RD18M-B2
D238	8-719-107-15	DIODE	RD18M-B2
D240	8-719-107-15	DIODE	RD18M-B2
D242	8-719-107-15	DIODE	RD18M-B2
D244	8-719-107-15	DIODE	RD18M-B2
D246	8-719-107-15	DIODE	RD18M-B2
D248	8-719-107-15	DIODE	RD18M-B2
D249	8-719-106-44	DIODE	RD9.1M-B2

Ref. No.	Part No.	Description	Remarks
D250	8-719-106-44	DIODE RD9.1M-B2	
D251	8-719-106-44	DIODE RD9.1M-B2	
D252	8-719-106-44	DIODE RD9.1M-B2	
D253	8-719-106-44	DIODE RD9.1M-B2	
D254	8-719-106-44	DIODE RD9.1M-B2	
D255	8-719-106-44	DIODE RD9.1M-B2	
D256	8-719-106-44	DIODE RD9.1M-B2	
D257	8-719-106-44	DIODE RD9.1M-B2	
D258	8-719-106-44	DIODE RD9.1M-B2	
D259	8-719-106-44	DIODE RD9.1M-B2	
D260	8-719-106-44	DIODE RD9.1M-B2	
D261	8-719-106-44	DIODE RD9.1M-B2	
D262	8-719-106-44	DIODE RD9.1M-B2	
D263	8-719-106-44	DIODE RD9.1M-B2	
D264	8-719-106-44	DIODE RD9.1M-B2	
D265	8-719-106-44	DIODE RD9.1M-B2	
D266	8-719-106-44	DIODE RD9.1M-B2	
D267	8-719-106-44	DIODE RD9.1M-B2	
D268	8-719-106-44	DIODE RD9.1M-B2	
D269	8-719-106-44	DIODE RD9.1M-B2	
D270	8-719-106-44	DIODE RD9.1M-B2	
D271	8-719-106-44	DIODE RD9.1M-B2	
D272	8-719-106-44	DIODE RD9.1M-B2	
D273	8-719-106-44	DIODE RD9.1M-B2	
D274	8-719-106-44	DIODE RD9.1M-B2	
D275	8-719-106-44	DIODE RD9.1M-B2	
D276	8-719-106-44	DIODE RD9.1M-B2	
D277	8-719-106-44	DIODE RD9.1M-B2	
D278	8-719-106-44	DIODE RD9.1M-B2	
D279	8-719-106-44	DIODE RD9.1M-B2	
D280	8-719-106-44	DIODE RD9.1M-B2	
D281	8-719-106-44	DIODE RD9.1M-B2	
D282	8-719-106-44	DIODE RD9.1M-B2	
D283	8-719-106-44	DIODE RD9.1M-B2	
D284	8-719-106-44	DIODE RD9.1M-B2	
D285	8-719-106-44	DIODE RD9.1M-B2	
D286	8-719-106-44	DIODE RD9.1M-B2	
D287	8-719-106-44	DIODE RD9.1M-B2	
D288	8-719-106-44	DIODE RD9.1M-B2	
D289	8-719-106-44	DIODE RD9.1M-B2	
D290	8-719-106-44	DIODE RD9.1M-B2	
		< FERRITE BEAD >	
FB201	1-543-775-11	FILTER, EMI	
FB202	1-543-775-11	FILTER, EMI	
FB203	1-543-775-11	FILTER, EMI	
FB204	1-543-775-11	FILTER, EMI	
FB205	1-543-775-11	FILTER, EMI	
FB206	1-543-775-11	FILTER, EMI	
FB207	1-543-775-11	FILTER, EMI	
FB208	1-543-775-11	FILTER, EMI	
FB209	1-543-775-11	FILTER, EMI	
FB210	1-543-775-11	FILTER, EMI	
FB211	1-543-775-11	FILTER, EMI	
FB212	1-543-775-11	FILTER, EMI	
FB213	1-543-775-11	FILTER, EMI	
FB214	1-543-775-11	FILTER, EMI	
FB215	1-543-775-11	FILTER, EMI	
FB216	1-543-775-11	FILTER, EMI	
FB217	1-543-775-11	FILTER, EMI	
FB218	1-543-775-11	FILTER, EMI	
FB219	1-543-775-11	FILTER, EMI	
FB220	1-543-775-11	FILTER, EMI	
FB221	1-543-775-11	FILTER, EMI	
FB222	1-543-775-11	FILTER, EMI	
FB223	1-543-775-11	FILTER, EMI	
FB224	1-543-775-11	FILTER, EMI	
FB225	1-543-775-11	FILTER, EMI	
FB226	1-543-775-11	FILTER, EMI	
FB228	1-543-775-11	FILTER, EMI	
FB229	1-543-775-11	FILTER, EMI	
FB230	1-543-775-11	FILTER, EMI	
FB231	1-543-775-11	FILTER, EMI	
FB232	1-543-775-11	FILTER, EMI	
FB234	1-543-775-11	FILTER, EMI	
FB235	1-543-775-11	FILTER, EMI	
FB236	1-543-775-11	FILTER, EMI	
FB237	1-543-775-11	FILTER, EMI	
FB238	1-543-775-11	FILTER, EMI	
FB239	1-543-775-11	FILTER, EMI	
FB240	1-543-775-11	FILTER, EMI	
FB242	1-543-775-11	FILTER, EMI	
FB243	1-543-775-11	FILTER, EMI	
FB244	1-543-775-11	FILTER, EMI	
FB245	1-543-775-11	FILTER, EMI	
FB246	1-543-775-11	FILTER, EMI	
FB247	1-543-775-11	FILTER, EMI	
FB248	1-543-775-11	FILTER, EMI	
FB249	1-543-775-11	FILTER, EMI	
FB250	1-543-775-11	FILTER, EMI	
FB251	1-543-775-11	FILTER, EMI	
FB252	1-543-775-11	FILTER, EMI	
FB253	1-543-775-11	FILTER, EMI	
FB254	1-543-775-11	FILTER, EMI	
FB255	1-543-775-11	FILTER, EMI	
FB271	1-412-390-21	INDUCTOR CHIP 0uH	
FB272	1-412-390-21	INDUCTOR CHIP 0uH	
FB273	1-412-390-21	INDUCTOR CHIP 0uH	

Ref. No.	Part No.	Description	Remarks
FB274	1-412-390-21	INDUCTOR CHIP 0uH	
FB275	1-412-390-21	INDUCTOR CHIP 0uH	
FB276	1-412-390-21	INDUCTOR CHIP 0uH	
FB277	1-412-390-21	INDUCTOR CHIP 0uH	
FB278	1-412-390-21	INDUCTOR CHIP 0uH	
FB279	1-412-390-21	INDUCTOR CHIP 0uH	
FB280	1-412-390-21	INDUCTOR CHIP 0uH	
FB281	1-412-390-21	INDUCTOR CHIP 0uH	
FB282	1-412-390-21	INDUCTOR CHIP 0uH	
FB283	1-412-390-21	INDUCTOR CHIP 0uH	
FB284	1-412-390-21	INDUCTOR CHIP 0uH	
FB285	1-412-390-21	INDUCTOR CHIP 0uH	
FB286	1-412-390-21	INDUCTOR CHIP 0uH	
FB287	1-412-390-21	INDUCTOR CHIP 0uH	
FB288	1-412-390-21	INDUCTOR CHIP 0uH	
FB289	1-412-390-21	INDUCTOR CHIP 0uH	
FB290	1-412-390-21	INDUCTOR CHIP 0uH	
FB291	1-412-390-21	INDUCTOR CHIP 0uH	
		< IC >	
IC202	8-759-011-65	IC MC74HC4053F (RS-232C/422 SELECT SWITCH)	
IC203	8-759-011-65	IC MC74HC4053F (RS-232C/422 SELECT SWITCH)	
IC204	8-759-923-65	IC AM26LS31CNS (RS-422 DRIVER)	
IC206	8-759-923-64	IC AM26LS32ACNS (RS-422 DRIVER)	
IC207	8-759-092-85	IC MAX241CWI-T(RS-232C DRIVER/RECEIVER)	
IC208	8-759-092-85	IC MAX241CWI-T(RS-232C DRIVER/RECEIVER)	
IC209	8-759-092-85	IC MAX241CWI-T(RS-232C DRIVER/RECEIVER)	
		< COIL >	
L201	1-412-028-11	INDUCTOR CHIP 4.7uH	
		< RESISTOR >	
R222	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R223	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R224	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R225	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R226	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R227	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R228	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R229	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R230	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R235	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R236	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R237	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R238	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R239	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R240	1-216-182-00	METAL GLAZE 220 5% 1/8W	

Ref. No.	Part No.	Description	Remarks
R241	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R242	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R243	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R244	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R245	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R246	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R247	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R248	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R249	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R250	1-216-182-00	METAL GLAZE 220 5% 1/8W	
		< SWITCH >	
S201	1-572-442-11	SWITCH, SLIDE (RECORDER REMOTE)	
S202	1-572-442-11	SWITCH, SLIDE (1-PLAYER REMOTE-2)	
**********			
*	A-7066-126-A	VI-126 (P) BOARD, COMPLETE **********	(Ref. No. 6,000 Seriese)
		< CAPACITOR >	
C110	1-126-394-11	ELECT CHIP 10uF 20% 16V	
C111	1-126-394-11	ELECT CHIP 10uF 20% 16V	
C112	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C113	1-164-237-11	CERAMIC CHIP 16PF 5% 50V	
C114	1-163-110-00	CERAMIC CHIP 51PF 5% 50V	
C115	1-162-916-11	CERAMIC CHIP 12PF 5% 50V	
C116	1-162-916-11	CERAMIC CHIP 12PF 5% 50V	
C117	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C118	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C119	1-126-394-11	ELECT CHIP 10uF 20% 16V	
C120	1-164-005-11	CERAMIC CHIP 0.47uF 25V	
C121	1-126-394-11	ELECT CHIP 10uF 20% 16V	
C122	1-126-394-11	ELECT CHIP 10uF 20% 16V	
C123	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C152	1-126-394-11	ELECT CHIP 10uF 20% 16V	
C153	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C154	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C155	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C156	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C157	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C158	1-126-206-11	ELECT CHIP 100uF 20% 6.3V	
C159	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C160	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C161	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C162	1-126-206-11	ELECT CHIP 100uF 20% 6.3V	
C163	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C164	1-164-217-11	CERAMIC CHIP 150PF 5% 50V	
C165	1-126-394-11	ELECT CHIP 10uF 20% 16V	
C166	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C167	1-126-394-11	ELECT CHIP 10uF 20% 16V	

Ref. No.	Part No.	Description			Remarks
C168	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C169	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C170	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C171	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C172	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C173	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C174	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C175	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C176	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C177	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C178	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C179	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C180	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C181	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C191	1-128-065-11	ELECT	68uF	20%	10V
C192	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C193	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C194	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C200	1-126-394-11	ELECT CHIP	10uF	20%	16V
C201	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C202	1-126-394-11	ELECT CHIP	10uF	20%	16V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-126-394-11	ELECT CHIP	10uF	20%	16V
C205	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C206	1-126-394-11	ELECT CHIP	10uF	20%	16V
C207	1-126-394-11	ELECT CHIP	10uF	20%	16V
C208	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C209	1-126-394-11	ELECT CHIP	10uF	20%	16V
C210	1-126-394-11	ELECT CHIP	10uF	20%	16V
C211	1-126-394-11	ELECT CHIP	10uF	20%	16V
C212	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C213	1-164-237-11	CERAMIC CHIP	16PF	5%	50V
C214	1-163-110-00	CERAMIC CHIP	51PF	5%	50V
C215	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C216	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C217	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C218	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C219	1-126-394-11	ELECT CHIP	10uF	20%	16V
C220	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C221	1-126-394-11	ELECT CHIP	10uF	20%	16V
C222	1-126-394-11	ELECT CHIP	10uF	20%	16V
C223	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C224	1-126-394-11	ELECT CHIP	10uF	20%	16V
C225	1-126-394-11	ELECT CHIP	10uF	20%	16V
C226	1-126-394-11	ELECT CHIP	10uF	20%	16V
C227	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C228	1-126-394-11	ELECT CHIP	10uF	20%	16V
C229	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C230	1-126-394-11	ELECT CHIP	10uF	20%	16V
C231	1-126-394-11	ELECT CHIP	10uF	20%	16V

Ref. No.	Part No.	Description			Remarks
C232	1-126-394-11	ELECT CHIP	10uF	20%	16V
C233	1-126-394-11	ELECT CHIP	10uF	20%	16V
C234	1-126-394-11	ELECT CHIP	10uF	20%	16V
C235	1-126-394-11	ELECT CHIP	10uF	20%	16V
C236	1-126-394-11	ELECT CHIP	10uF	20%	16V
C237	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C238	1-126-394-11	ELECT CHIP	10uF	20%	16V
C239	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C240	1-126-394-11	ELECT CHIP	10uF	20%	16V
C241	1-126-394-11	ELECT CHIP	10uF	20%	16V
C242	1-126-394-11	ELECT CHIP	10uF	20%	16V
C243	1-126-394-11	ELECT CHIP	10uF	20%	16V
C244	1-126-394-11	ELECT CHIP	10uF	20%	16V
C245	1-126-394-11	ELECT CHIP	10uF	20%	16V
C246	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C247	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C248	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C249	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C250	1-126-394-11	ELECT CHIP	10uF	20%	16V
C251	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C252	1-126-394-11	ELECT CHIP	10uF	20%	16V
C253	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C254	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C255	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C256	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C257	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C258	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C259	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C260	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C261	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C262	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C263	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C264	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C265	1-126-394-11	ELECT CHIP	10uF	20%	16V
C266	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C267	1-126-394-11	ELECT CHIP	10uF	20%	16V
C268	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C269	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C270	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C271	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C272	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C273	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C274	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C275	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C276	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C277	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C278	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C279	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C280	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C281	1-164-156-11	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remarks
C282	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C283	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C284	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C285	1-126-394-11	ELECT CHIP	10uF	20%	16V
C286	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C287	1-126-394-11	ELECT CHIP	10uF	20%	16V
C288	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C289	1-126-394-11	ELECT CHIP	10uF	20%	16V
C290	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C291	1-128-065-11	ELECT	68uF	20%	10V
C292	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C293	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C294	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C295	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C296	1-126-394-11	ELECT CHIP	10uF	20%	16V
C297	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C298	1-128-065-11	ELECT	68uF	20%	10V
C299	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C300	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C811	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C812	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C813	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C814	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

< CONNECTOR >

CN101	1-506-491-11	PIN, CONNECTOR 12P
CN102	1-580-722-11	CONNECTOR, BOARD TO BOARD 28P
CN103	1-580-722-11	CONNECTOR, BOARD TO BOARD 28P
CN104	1-506-485-11	PIN, CONNECTOR 6P
CN105	1-506-485-11	PIN, CONNECTOR 6P

< FERRITE BEAD >

FB101	1-543-813-21	FILTER, EMI
FB151	1-543-813-21	FILTER, EMI
FB191	1-543-813-21	FILTER, EMI
FB200	1-543-813-21	FILTER, EMI
FB201	1-543-813-21	FILTER, EMI
FB204	1-543-813-21	FILTER, EMI
FB209	1-543-813-21	FILTER, EMI
FB210	1-543-813-21	FILTER, EMI
FB251	1-543-813-21	FILTER, EMI
FB291	1-543-813-21	FILTER, EMI

< FILTER >

FL101	1-239-593-11	FILTER, LC
FL201	1-239-593-11	FILTER, LC

< IC >

IC101	8-752-052-58	IC	CXA1410M (INPUT SELECT)
IC104	8-759-011-64	IC	MC74HC4052F (SELECTOR)
IC105	8-752-053-21	IC	CXA1211M (VCA)
IC106	8-752-039-34	IC	CXA1208Q (ACC & ACK)
IC107	8-759-710-82	IC	NJM2406F (COMP)
IC191	8-759-822-XX	IC	L88MS05T-FA-TL (+5V REG)
IC201	8-752-052-58	IC	CXA1410M (INPUT SELECT)
IC204	8-759-011-64	IC	MC74HC4052F (SELECTOR)
IC205	8-752-053-21	IC	CXA1211M (VCA)
IC206	8-752-039-34	IC	CXA1208Q (ACC & ACK)
IC207	8-759-710-82	IC	NJM2406F (COMP)
IC208	8-757-991-00	IC	CX7991 (ADDRESS DECODER(SERIAL TO PARLLEL))
IC209	8-757-991-00	IC	CX7991 (ADDRESS DECODER(SERIAL TO PARLLEL))
IC210	8-752-052-58	IC	CXA1410M (INPUT SELECT)
IC211	8-759-822-XX	IC	L88MS05T-FA-TL (+5V REG)
IC291	8-759-822-XX	IC	L88MS05T-FA-TL (+5V REG)

< COIL >

L101	1-410-388-31	INDUCTOR CHIP 39uH
L102	1-410-388-31	INDUCTOR CHIP 39uH
L103	1-410-658-31	INDUCTOR CHIP 220uH
L105	1-410-658-31	INDUCTOR CHIP 220uH
L106	1-410-658-31	INDUCTOR CHIP 220uH
L107	1-410-658-31	INDUCTOR CHIP 220uH
L201	1-410-388-31	INDUCTOR CHIP 39uH
L202	1-410-388-31	INDUCTOR CHIP 39uH
L203	1-410-658-31	INDUCTOR CHIP 220uH
L205	1-410-658-31	INDUCTOR CHIP 220uH
L206	1-410-658-31	INDUCTOR CHIP 220uH
L207	1-410-658-31	INDUCTOR CHIP 220uH
L208	1-410-658-31	INDUCTOR CHIP 220uH

< TRANSISTOR >

Q101	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q102	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q103	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q104	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q105	8-729-216-22	TRANSISTOR	2SA1162-G
Q106	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q109	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q110	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q111	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q112	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q113	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q114	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q115	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q116	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q200	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q201	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q202	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q203	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q204	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q205	8-729-216-22	TRANSISTOR	2SA1162-G

VI-126

Ref. No.	Part No.	Description				Remarks
Q206	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q207	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q208	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q209	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q210	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q211	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q212	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q213	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q214	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q215	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q216	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
		< RESISTOR >				
R101	1-216-817-11	METAL CHIP	470	5%	1/16W	
R102	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R103	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R104	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R105	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R106	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R107	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R108	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W	
R109	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R110	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R111	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R112	1-216-817-11	METAL CHIP	470	5%	1/16W	
R113	1-218-857-11	METAL CHIP	2.7K	0.50%	1/16W	
R114	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R115	1-216-817-11	METAL CHIP	470	5%	1/16W	
R116	1-216-817-11	METAL CHIP	470	5%	1/16W	
R133	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R134	1-218-857-11	METAL CHIP	2.7K	0.50%	1/16W	
R135	1-218-840-11	METAL GLAZE	510	0.50%	1/16W	
R136	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R137	1-218-857-11	METAL CHIP	2.7K	0.50%	1/16W	
R138	1-218-840-11	METAL GLAZE	510	0.50%	1/16W	
R139	1-218-840-11	METAL GLAZE	510	0.50%	1/16W	
R140	1-218-839-11	METAL GLAZE	470	0.50%	1/16W	
R141	1-218-853-11	METAL CHIP	1.8K	0.50%	1/16W	
R142	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R143	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W	
R144	1-216-817-11	METAL CHIP	470	5%	1/16W	
R145	1-218-840-11	METAL GLAZE	510	0.50%	1/16W	
R146	1-218-840-11	METAL GLAZE	510	0.50%	1/16W	
R147	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R148	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R149	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W	
R150	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R151	1-216-833-11	METAL CHIP	10K	5%	1/16W	

Ref. No.	Part No.	Description				Remarks
R152	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R153	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R154	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R156	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R157	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R158	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	
R159	1-216-817-11	METAL CHIP	470	5%	1/16W	
R160	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R161	1-218-484-11	METAL GLAZE	750	5%	1/16W	
R162	1-216-814-11	METAL CHIP	270	5%	1/16W	
R163	1-218-844-11	METAL CHIP	750	0.50%	1/16W	
R164	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	
R165	1-218-863-11	METAL CHIP	4.7K	0.50%	1/16W	
R166	1-218-879-11	METAL CHIP	22K	0.50%	1/16W	
R167	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W	
R168	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R169	1-216-817-11	METAL CHIP	470	5%	1/16W	
R170	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R191	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R192	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R200	1-216-817-11	METAL CHIP	470	5%	1/16W	
R201	1-216-817-11	METAL CHIP	470	5%	1/16W	
R202	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R203	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R204	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R205	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R206	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R207	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R208	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W	
R209	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R210	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R211	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R212	1-216-817-11	METAL CHIP	470	5%	1/16W	
R213	1-218-857-11	METAL CHIP	2.7K	0.50%	1/16W	
R214	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R215	1-216-817-11	METAL CHIP	470	5%	1/16W	
R216	1-216-817-11	METAL CHIP	470	5%	1/16W	
R217	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R218	1-218-857-11	METAL CHIP	2.7K	0.50%	1/16W	
R219	1-216-817-11	METAL CHIP	470	5%	1/16W	
R220	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R221	1-218-855-11	METAL CHIP	2.2K	0.50%	1/16W	
R222	1-218-847-11	METAL CHIP	1K	0.50%	1/16W	
R223	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R224	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W	
R225	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	
R226	1-216-817-11	METAL CHIP	470	5%	1/16W	
R227	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R228	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R233	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W	

Ref. No.	Part No.	Description			Remarks
R234	1-218-857-11	METAL CHIP	2.7K	0.50%	1/16W
R235	1-218-840-11	METAL GLAZE	510	0.50%	1/16W
R236	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W
R237	1-218-857-11	METAL CHIP	2.7K	0.50%	1/16W
R238	1-218-840-11	METAL GLAZE	510	0.50%	1/16W
R239	1-218-840-11	METAL GLAZE	510	0.50%	1/16W
R240	1-218-839-11	METAL GLAZE	470	0.50%	1/16W
R241	1-218-853-11	METAL CHIP	1.8K	0.50%	1/16W
R242	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W
R243	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W
R244	1-216-817-11	METAL CHIP	470	5%	1/16W
R245	1-218-840-11	METAL GLAZE	510	0.50%	1/16W
R246	1-218-840-11	METAL GLAZE	510	0.50%	1/16W
R247	1-218-847-11	METAL CHIP	1K	0.50%	1/16W
R248	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W
R249	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W
R250	1-216-821-11	METAL CHIP	1K	5%	1/16W
R251	1-216-833-11	METAL CHIP	10K	5%	1/16W
R252	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R253	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R254	1-216-845-11	METAL CHIP	100K	5%	1/16W
R256	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R257	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R258	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R259	1-216-817-11	METAL CHIP	470	5%	1/16W
R260	1-216-833-11	METAL CHIP	10K	5%	1/16W
R261	1-218-484-11	METAL GLAZE	750	5%	1/16W
R262	1-216-814-11	METAL CHIP	270	5%	1/16W
R263	1-218-844-11	METAL CHIP	750	0.50%	1/16W
R264	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W
R265	1-218-863-11	METAL CHIP	4.7K	0.50%	1/16W
R266	1-218-879-11	METAL CHIP	22K	0.50%	1/16W
R267	1-218-852-11	METAL CHIP	1.6K	0.50%	1/16W
R268	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W
R269	1-216-817-11	METAL CHIP	470	5%	1/16W
R270	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R271	1-216-813-11	METAL CHIP	220	5%	1/16W
R272	1-216-813-11	METAL CHIP	220	5%	1/16W
R273	1-216-813-11	METAL CHIP	220	5%	1/16W
R274	1-216-813-11	METAL CHIP	220	5%	1/16W
R275	1-216-813-11	METAL CHIP	220	5%	1/16W
R276	1-216-813-11	METAL CHIP	220	5%	1/16W
R277	1-216-813-11	METAL CHIP	220	5%	1/16W
R278	1-216-813-11	METAL CHIP	220	5%	1/16W
R279	1-216-813-11	METAL CHIP	220	5%	1/16W
R280	1-216-813-11	METAL CHIP	220	5%	1/16W
R281	1-216-813-11	METAL CHIP	220	5%	1/16W
R282	1-216-813-11	METAL CHIP	220	5%	1/16W
R283	1-216-813-11	METAL CHIP	220	5%	1/16W
R284	1-216-813-11	METAL CHIP	220	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R285	1-216-813-11	METAL CHIP	220	5%	1/16W
R286	1-216-813-11	METAL CHIP	220	5%	1/16W
R287	1-216-813-11	METAL CHIP	220	5%	1/16W
R288	1-216-813-11	METAL CHIP	220	5%	1/16W
R289	1-216-813-11	METAL CHIP	220	5%	1/16W
R290	1-216-813-11	METAL CHIP	220	5%	1/16W
R291	1-216-833-11	METAL CHIP	10K	5%	1/16W
R292	1-216-849-11	METAL CHIP	220K	5%	1/16W
R293	1-216-813-11	METAL CHIP	220	5%	1/16W
R294	1-216-813-11	METAL CHIP	220	5%	1/16W
R295	1-216-813-11	METAL CHIP	220	5%	1/16W
R811	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R812	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R813	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R814	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R815	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R816	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R817	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R818	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R819	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R820	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R821	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R822	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R823	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R824	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R825	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R826	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R827	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R828	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R829	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R830	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R831	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R832	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R833	1-218-827-11	METAL GLAZE	150	0.50%	1/16W
R834	1-218-827-11	METAL GLAZE	150	0.50%	1/16W

< VIBRATOR >

X101	1-579-366-11	VIBRATOR, CRYSTAL	
X201	1-579-366-11	VIBRATOR, CRYSTAL	

****

⚠	1-413-954-11	POWER BLOCK	
		**********	
			(Ref. No. 9,000 Seriese)
⚠	1-533-225-11	FUSE CLIP	

< CAPACITOR >

⚠ C001	9-907-314-01	FILM	0.47uF		250V
⚠ C002	9-906-821-01	CERAMIC	100PF		
⚠ C003	9-906-821-01	CERAMIC	100PF		
⚠ C004	9-907-314-01	FILM	0.47uF		250V
C005	1-136-153-00	FILM	0.01uF	5%	50V

POWER BLOCK

Ref. No.	Part No.	Description			Remarks
C006	1-128-195-11	ELECT	39uF	20%	25V
C007	9-906-823-01	ELECT	680uF		200V
C008	9-906-823-01	ELECT	680uF		200V
C009	9-907-315-01	ELECT	100uF	20%	50V
C010	1-107-518-11	ELECT	39uF	20%	50V
C011	1-136-165-00	FILM	0.1uF	5%	50V
C012	1-130-500-11	FILM	470PF		
C013	1-107-427-11	CERAMIC	0.001uF	10%	1KV
C014	1-107-427-11	CERAMIC	0.001uF	10%	1KV
C015	9-906-824-01	ELECT	180uF		35V
C016	1-124-510-11	ELECT	220uF	20%	35V
C017	1-161-485-00	CERAMIC	0.1uF	Z%	50V
C018	1-107-427-11	CERAMIC	0.001uF	10%	1KV
C019	1-107-427-11	CERAMIC	0.001uF	10%	1KV
C020	1-124-539-11	ELECT	330uF	20%	35V
C021	1-124-539-11	ELECT	330uF	20%	35V
C022	1-128-195-11	ELECT	39uF	20%	25V
C023	1-124-510-11	ELECT	220uF	20%	35V
C024	1-161-485-11	CERAMIC	0.1uF	Z%	50V
C025	1-161-485-11	CERAMIC	0.1uF	Z%	50V
C026	9-906-825-01	FILM	4700PF		250V
C027	9-906-825-01	FILM	4700PF		250V
C028	1-124-510-11	ELECT	220uF	20%	35V
C029	1-124-942-11	ELECT	180uF	20%	10V
C030	1-161-485-11	CERAMIC	0.1uF	Z%	50V
C031	1-124-942-11	ELECT	180uF	20%	10V
C032	1-161-485-11	CERAMIC	0.1uF	Z%	50V
C033	9-906-826-01	FILM	0.01uF		250V
C034	9-906-826-01	FILM	0.01uF		250V
C035	1-124-568-00	ELECT	4700uF	20%	10V
C036	1-124-567-00	ELECT	1200uF	20%	10V
C037	1-161-485-11	CERAMIC	0.1uF	Z%	50V
C038	9-906-827-01	ELECT	39uF		35V
C039	9-906-827-01	ELECT	39uF		35V
C040	9-906-828-01	ELECT	1uF		50V
C042	1-136-165-00	FILM	0.1uF	5%	50V
C100	9-906-830-01	CERAMIC	2200PF		
		< CONNECTOR >			
CN001	9-906-841-01	CONNECTOR 3P			
CN002	1-564-030-00	CONNECTOR 5P			
CN003	1-564-033-00	CONNECTOR 8P			
		< AC INLET >			
⚠CNJ001	9-906-840-01	AC INLET			
		< CRYSTAL >			
CR001	9-906-808-01	TRIAC			

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D001	8-719-500-58	DIODE D3SB60	
D002	8-719-951-30	DIODE ERA91-02	
D003	8-719-971-20	DIODE ERC38-06	
D004	8-719-971-20	DIODE ERC38-06	
D005	8-719-951-30	DIODE ERA91-02	
D006	8-719-951-30	DIODE ERA91-02	
D007	8-719-920-67	DIODE ERC91-02	
D008	8-719-920-67	DIODE ERC91-02	
D009	8-719-200-02	DIODE 10E-2	
D010	8-719-200-02	DIODE 10E-2	
D011	9-906-807-01	DIODE ERC90M-02	
D012	9-906-807-01	DIODE ERC90M-02	
D013	8-719-200-02	DIODE 10E-2	
D014	8-719-200-02	DIODE 10E-2	
D015	8-719-200-02	DIODE 10E-2	
D016	8-719-200-02	DIODE 10E-2	
D017	8-719-971-00	DIODE ERAC85M-009	
D018	8-719-200-02	DIODE 10E-2	
D019	8-719-200-02	DIODE 10E-2	
D020	8-719-200-02	DIODE 10E-2	
D021	8-719-200-02	DIODE 10E-2	
D022	8-719-992-35	DIODE ESAD83M-004	
D023	8-719-911-19	DIODE 1SS119	
ZD001	8-719-160-80	DIODE RD27FB2	
ZD002	8-719-160-88	DIODE RD33FB3	
ZD003	8-719-109-51	DIODE RD2.0ESAB2	
ZD004	8-719-109-93	DIODE RD6.2ESAB2	
ZD005	8-719-110-88	DIODE RD39ESB2	
		< FUSE >	
⚠F001	1-576-133-11	FUSE 3.15A 250V	
⚠F001	9-906-837-01	FUSE CLIP	
		< HIC >	
HIC001	9-906-811-01	IC-005	
		< IC >	
IC001	8-759-154-48	IC uPC24M15HF (+15V REG)	
IC002	8-759-154-48	IC uPC24M15HF (-15V REG)	
IC003	9-906-809-01	IC uPC79M08HF (-8V REG)	
IC004	8-759-513-71	IC PQ05RF21 (+5V REG)	
IC005	9-906-810-01	IC PQ05RF14 (+5V REG)	
IC006	8-759-140-85	IC uPC1093J	
		< COIL >	
L001	9-906-831-01	LINE FILTER	
L002	9-906-832-01	LINE FILTER	
L003	9-906-833-01	CHOK COIL	
L004	9-906-833-01	CHOK COIL	
L005	9-906-834-01	CHOK COIL	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

POWER BLOCK

Ref. No.	Part No.	Description			Remarks
L006	9-906-835-01	CHOK COIL			
L007	9-906-836-01	FERRITE BEAD			
L008	9-906-836-01	FERRITE BEAD			
L009	9-906-836-01	FERRITE BEAD			
L010	9-906-836-01	FERRITE BEAD			
		< PHOTO COUPLER >			
PC001	9-998-135-01	PHOTO COUPLER PC113			
PC002	9-906-813-01	PHOTO COUPLER TLP741J			
		< FET >			
⚠Q001	9-906-806-01	FET 2SK1082-01			
		< RESISTOR >			
⚠R001	1-214-930-11	METAL GLAZE	510K	1%	1/2W
⚠R002	9-906-814-01	FUSIBLE RESISTOR	10		1.6W
R003	1-249-417-11	CARBON	1K	5%	1/2W
R004	9-906-815-01	METAL GLAZE	51		1W
⚠R005	1-215-861-00	METAL GLAZE	47	5%	1W
⚠R006	1-215-904-11	METAL GLAZE	100K	5%	2W
⚠R007	1-215-904-11	METAL GLAZE	100K	5%	2W
⚠R008	1-220-388-11	METAL GLAZE	68K	5%	1W
⚠R009	1-215-904-11	METAL GLAZE	100K	5%	2W
R010	9-906-816-01	CEMENT RESISTOR	0.22		5W
R011	1-247-855-31	CARBON	10K	5%	1/4W
R012	1-249-433-11	CARBON	22K	5%	1/4W
R013	1-249-391-11	CARBON	6.8	5%	1/4W
R014	1-249-432-11	CARBON	18K	5%	1/4W
R015	1-215-861-00	METAL GLAZE	47		1W
R016	1-249-385-11	CARBON	2.2	5%	1/4W
R017	1-247-862-11	CARBON	20K	5%	1/4W
R018	1-249-432-11	CARBON	18K	5%	1/4W
R019	1-247-807-31	CARBON	100	5%	1/4W
R020	1-247-807-31	CARBON	100	5%	1/4W
⚠R021	1-215-882-11	METAL GLAZE	22	5%	2W
⚠R022	1-215-882-11	METAL GLAZE	22	5%	2W
⚠R023	1-215-892-11	METAL GLAZE	1K	5%	2W
R024	1-247-843-31	CARBON	3.3K	5%	1/4W
⚠R025	1-215-882-11	METAL GLAZE	22	5%	1/4W
⚠R026	1-215-882-11	METAL GLAZE	22	5%	1/4W
⚠R027	1-215-892-11	METAL GLAZE	1K	5%	2W
R028	9-906-817-01	CEMENT RESISTOR	3.9		2.1W
R029	9-906-818-01	CEMENT RESISTOR	3.9		2.1W
R030	1-247-839-31	CARBON	2.2K	5%	1/4W
⚠R031	1-216-358-11	METAL GLAZE	5.6	5%	1W
⚠R032	1-216-360-11	METAL GLAZE	8.2	5%	1W
⚠R033	1-215-452-11	METAL GLAZE	180	5%	2W
R034	1-249-417-11	CARBON	1K	5%	1/4W
R035	1-249-417-11	CARBON	1K	5%	1/4W
⚠R036	1-216-378-11	METAL GLAZE	5.6	5%	2W
⚠R037	1-216-380-11	METAL GLAZE	8.2	5%	2W
R038	1-249-417-11	CARBON	1K	5%	1/4W
R039	1-249-417-11	CARBON	1K	5%	1/4W
R040	1-249-393-11	CARBON	10	5%	1/4W
R041	1-247-807-31	CARBON	100	5%	1/4W
R042	1-249-397-11	CARBON	22	5%	1/4W
R044	1-249-403-11	CARBON	68	5%	1/4W
R045	1-247-809-31	CARBON	120	5%	1/4W
R046	1-249-417-11	CARBON	1K	5%	1/4W
R047	1-249-417-11	CARBON	1K	5%	1/4W
		< SWITCH >			
⚠SW001	1-692-728-11	SWITCH			
		< TRANSFORMER >			
⚠T001	9-907-313-01	TRANSFORMER, SWITCHING			
		< THERMOSTAT >			
⚠TS001	9-906-839-01	THERMOSTAT			
		< VARIABLE RESISTOR >			
VR001	9-906-819-01	VARIABLE RESISTOR 300			
**********					
		MISCELLANEOUS			
		**********			
10	1-541-684-31	MOTOR, DC			
14	1-751-565-11	CABLE, FLAT (FRS-14)			
58	1-751-566-11	CABLE, FLAT (FKK-1)			
59	1-751-568-11	CABLE, FLAT (FKK-2)			
96	1-520-503-11	METER UNIT, LED LEVEL			
97	1-562-148-11	HOUSING, 3P			
98	1-467-473-11	KEYBOARD BLOCK			
* 116	1-633-548-13	PTC-39 BOARD			
120	1-562-151-11	HOUSING, 6P			
156	1-237-127-11	RES, VAR, CARBON 5K			
**********					
		ACCESSORIES & PACKING MATERIALS			
		**********			
⚠	1-590-910-11	CORD SET, POWER			
	3-757-628-11	MANUAL, INSTRUCTION (ENGLISH)			
	3-757-628-31	MANUAL, INSTRUCTION (FRENCH)			
	3-757-628-41	MANUAL, INSTRUCTION (GERMANY)			
	3-757-632-11	MANUAL, INSTRUCTION (PRIMER) (ENGLISH)			
	3-757-632-31	MANUAL, INSTRUCTION (PRIMER) (FRENCH)			
	3-757-632-41	MANUAL, INSTRUCTION (PRIMER) (GERMANY)			
*	3-957-092-01	CUSHION (UPPER)			
*	3-957-093-01	CUSHION (LOWER)			
*	3-957-094-11	INDIVIDUAL CARTON			
**********					

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks

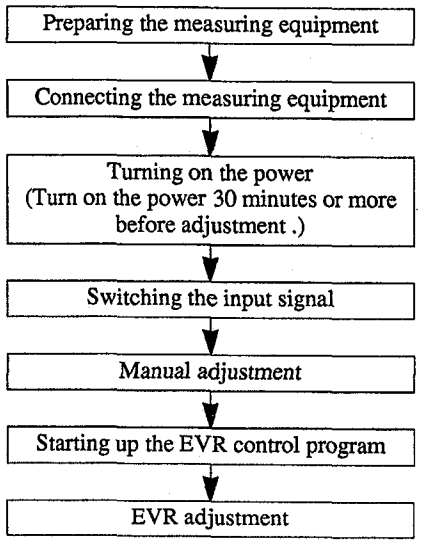
****
HARDWARE LIST
****

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-648-79	SCREW +BVTP 3X12 TYPE2 SLIT	
#3	7-621-592-00	SCREW +K 2.6X6	
#4	7-624-108-04	STOP RING 4.0, TYPE -E	
#5	7-623-924-01	WASHER 3.0, NYLONE	
#6	7-621-731-08	SET-SCT, HEX. 2X2.5, FLAT POINT	
#7	7-682-545-09	SCREW +B 3X4	
#8	7-682-646-09	SCREW +PS 3X5	
#9	7-688-003-12	W 3, MIDDLE	
#10	7-623-710-47	WASHER 8, WABE TYPE	
#11	7-682-553-04	SCREW +P 3X20	
#12	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
#13	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	

SECTION 8
ELECTRICAL ADJUSTMENTS

8-1. OUTLINE

Adjust as follows:



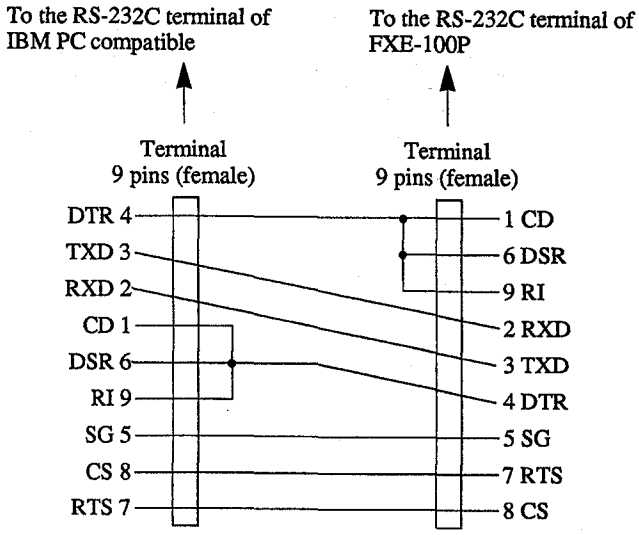
8-2. PREPARING THE MEASURING EQUIPMENT

8-2-1. Measuring Equipment and Tools Neededes

The following measuring equipment is necessary for making adjustments:

- Pattern generator
  which has the following three functions:
  i. S VIDEO terminal
  ii. White raster (100% white) output. (Refer to the next subsection, "8-2-2. Note on Measuring Equipment and Tools".)
  iii. Circle (monoscope) output
- Oscilloscope
- Vector scope
- 75 Ω terminator
- Monitor TV
- A personal computer (IBM PC compatible and MS-DOS)
- EVR control program (Refer to the next subsection, "8-2-2. Note on Measuring Equipment and Tools".)
- Adjusting disk: EVR control disk (J-6082-280-A)
- The floppy disk contains the programs for IBM PC compatible. (Refer to the next subsection, "8-2-2. Note on Measuring Equipment and Tools".)
- Exclusive RS-232C cable
  Sony RS-232C cable (1.5m cross cable) (PTA-909C)

Pin connections in the cable



8-2-2. Note on Measuring Equipment and Tools

Before adjustment, check the followings:

- Directly input the signals from the pattern generator to the waveform monitor or vector scope to check that the 100% white level and the color vectors are correct.
- Turn on the power of the measuring equipment 30 minutes or more before use.
- Do not use the original EVR control disk. Be sure to make a backup copy and use the backup copy disk for the adjustment.

8-3. CONNECTING THE MEASURING EQUIPMENT

Connect the measuring equipment as shown in the following tables:

Input to the unit

Input to the unit		Input signal
PLAYER 1	S VIDEO	CB
	VIDEO	—
PLAYER 2	S VIDEO	—
	VIDEO	CB
AUX 1	S VIDEO	—
	VIDEO	CIRCLE

Output from the unit

Output terminal	Measuring equipment
PGM 1	Oscilloscope Vector scope (terminated at 75 Ω)
MONITOR	Monitor TV
EDL IN/OUT	IBM PC compatible (RS-232C or COM terminal)

- **Service mode setting**
  (Timer counter display panel DP-46 board)

1) Press the SCREEN key (S904) in the SCREEN (monitor screen select) block to display the menu.
2) While pressing the Jog/Shuttle dial, press the three RESET keys simultaneously.

PLAYER 1	RESET key	(S916)	} Press down simultaneously.
PLAYER 2	RESET key	(S915)	
RECORDER	RESET key	(S917)	

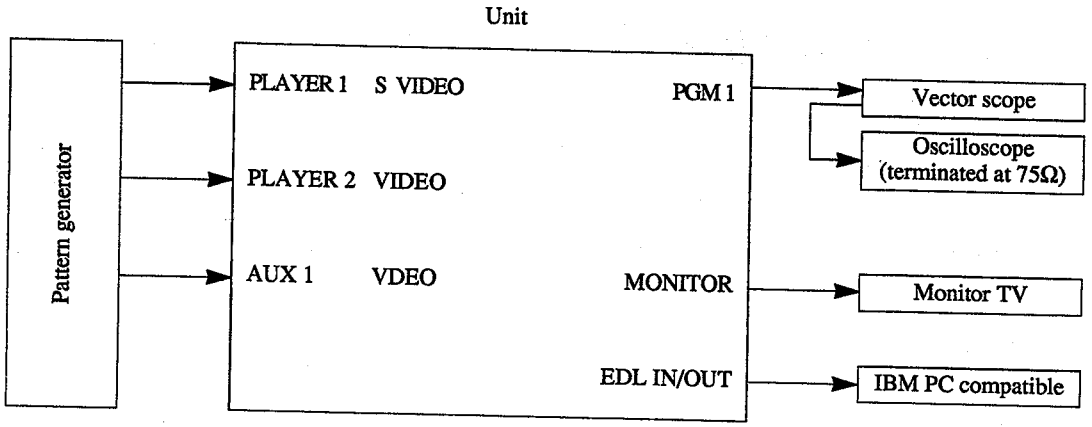
3) The service menu appears on the monitor TV.
   Press SET to Adjust.

```
*
  SERVICE
    ITEM-101
  EVR DATA ADJUST

  RS-232C          GO
       EXIT POWER OFF
```

4) Canceling the service mode
   Turn off the power switch (SW1) to cancel service mode.

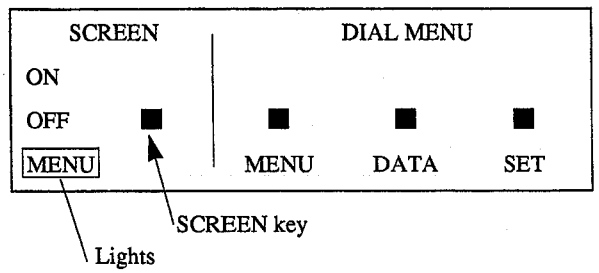
Connection diagram



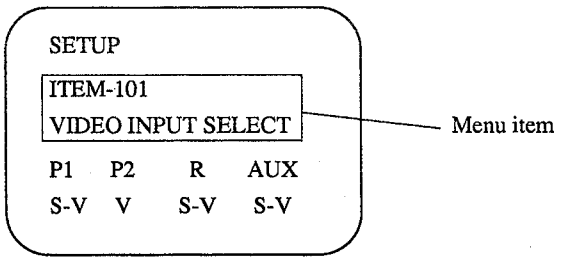
8-4. SWITCHING THE INPUT SIGNAL

Perform the following steps to set PLAYER 1 to S VIDEO, PLAYER 2 to VIDEO and AUX 1 to VIDEO.

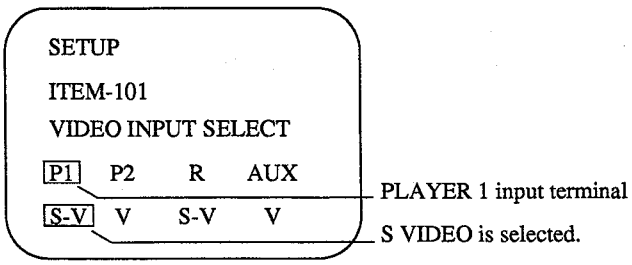
1) Turn on the power of the unit, measuring equipment and monitor TV.
2) Press the SCREEN key to enter the MENU mode. MENU will light.



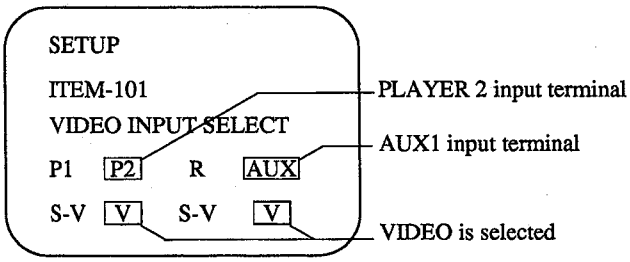
3) Push in the JOG SHUTTLE dial to enter JOG mode. The monitor TV displays a menu item.
4) Rotate the JOG dial while holding down the MENU key and display ITEM-101 (VIDEO INPUT SELECT) in the menu item.



5) (Without pressing the MENU key) rotate the JOG dial so that V (VIDEO) or S-V (S VIDEO) flashes under P1 (PLAYER 1). This operation allows the input signal of P1 (PLAYER 1) to be switched.
6) Rotate the JOG dial while holding down the DATA key to select S-V (S VIDEO) for P1 (PLAYER 1).
7) Press the SET key.
The input signal of P1 (PLAYER 1) is switched to S-V (S VIDEO). The selected data is stored.



8) Select for P2 (PLAYER 2) and AUX (AUX 1) in the same manner as steps 5 and 7, however instead select V (VIDEO) in step 6.



9) Press the SCREEN key to switch to the ON mode or OFF mode.

8-5. MANUAL ADJUSTMENT

Adjust each adjusting element while referring to "8-8. ADJUSTMENT PARTS ARRANGEMENT DIAGRAM" described later.

Note: Do not use an ordinary screwdriver on the elements. Use only the adjustment screwdrivers.

8-5-1. DV-19 4fsc Adjustment

Adjustment Purpose: To determine the oscillation frequency (sub carrier fo) which becomes the master.

Adjustment Error Symptom: After editing, the color fades or becomes rainbow-colored, or the picture runs horizontally.

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1
Measurement Point	TP503, IC532 pin ③
Measuring Equipment	Frequency counter
Adjusting Element	CV502
Specified Value	17.734476±0.00002MHz (Adjust the value nearest to the center.)

8-5-2. MM27A Write APC Adjustment

Adjustment Purpose: To adjust the position to write data to the memory.

Adjustment Error Symptom: The picture runs horizontally.

Signal	INPUT: No signal
Panel Operation	A-BUS: No signal B-BUS: No signal
Measurement Point	TP1, IC181 pin ㉜
Measuring Equipment	Frequency counter
Adjusting Element	CV171
Specified Value	17.734476±0.00002MHz (Adjust the value nearest to the center.)

8-5-3. MM27B Write APC Adjustment

Adjustment Purpose: To adjust the position to write data to the memory.

Adjustment Error Symptom: The picture runs horizontally.

Signal	INPUT: No signal
Panel Operation	A-BUS: No signal B-BUS: No signal
Measurement Point	TP1, IC181 pin ㉜
Measuring Equipment	Frequency counter
Adjusting Element	CV171
Specified Value	17.734476±0.00002MHz (Adjust the value nearest to the center.)

8-5-4. MM27A Write AFC Adjustment

Adjustment Purpose:

Adjustment Error Symptom:

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1
Measurement Point	TP131, IC131 pin ⑪
Measuring Equipment	Digital Voltmeter
Adjusting Element	CV131
Specified Value	2.2±0.1 V (Adjust the value nearest to the center.)

8-5-5. MM27B Write AFC Adjustment

Adjustment Purpose:

Adjustment Error Symptom:

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1
Measurement Point	TP131, IC131 pin ⑪
Measuring Equipment	Digital Voltmeter
Adjusting Element	CV131
Specified Value	2.2±0.1 V (Adjust the value nearest to the center.)

8-6. STARTING UP THE EVR CONTROL PROGRAM

1) Turn on the power of the IBM PC compatible.
2) Start up the MS-DOS.
3) Insert the EVR control disk in the floppy disk drive.

Note: First engage the tab of the floppy disk to write-protect to avoid deleting programs or data from the floppy disk.

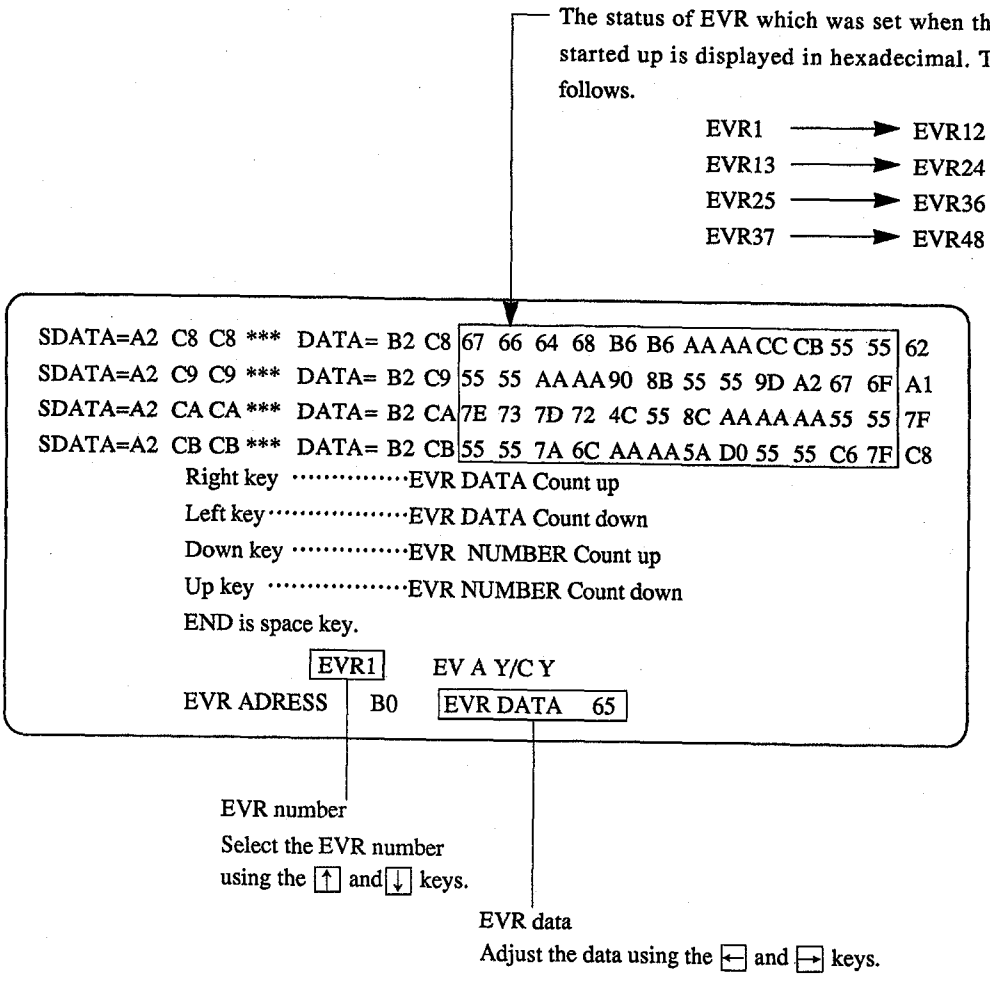
4) Type "IBM" and press the RETURN key to start up the EVR control program.
The following shows an example of inserting the floppy disk into the drive A:

```
C>A:↵
A>IBM↵
```

5) The following screen appears. Check that the exclusive RS-232C cable is connected and press the RETURN key.

```
Please connect RS-232C cable, and please push space key!
```

6) The EVR setting screen appears.



Note 1: When adjusting the EVR data, do not continuously hold down the ← or → key, press the ← or → key repeatedly.

Note 2: When E2-PROM of IC709 or 710 has been replaced, set EVR48 to 7F. When 7F is not set, data in the IC is effective.

7) Perform the adjustments according to the next subsection, "8-7. EVR ADJUSTMENT"

8) When all the adjustments are completed, press the space bar. The EVR control program ends and the MS-DOS prompt will appear.

8-7. EVR ADJUSTMENT

Adjust each EVR using the cursor keys. See "ADJUSTMENT PARTS ARRANGEMENT DIAGRAM" described later for the test points.

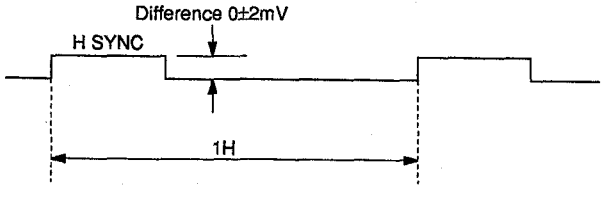
8-7-1. Fader A DC Level Adjustment

Adjustment Purpose: To adjust the balance of the black level of the picture.

Adjustment Error Symptom: The black level is not the same between the A-BUS and B-BUS.

Note: Adjust the black level balance of B-BUS as described in the next subsection "Fader B DC Level Adjustment". Avoid adjusting the balance of A-BUS in this "Fader A DC Level Adjustment" if possible.

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ■ EFFECT TRANSITION LEVER: A-BUS
Measurement Point	CL628 (Q613(E))
Measuring Equipment	Oscilloscope (range AC)
Adjusting Element	EVR 23 (EV A FDC)
Standard Setting	67
Specified Value	Difference 0±2 mV

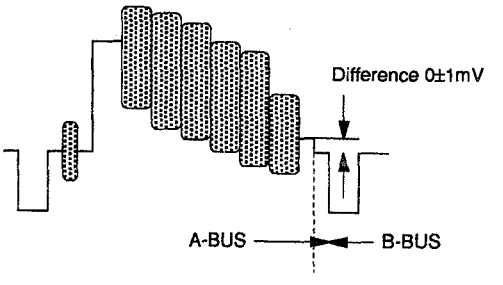


8-7-2. Fader B DC Level Adjustment

Adjustment Purpose: To adjust the balance of the black level of the picture.

Adjustment Error Symptom: The black level is not the same between the A-BUS and B-BUS.

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ■ EFFECT TRANSITION LEVER: Adjust so that the center of the black bar of CB is wiped.
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 24 (EV B FDC)
Standard Setting	6F
Specified Value	Difference 0±1 mV

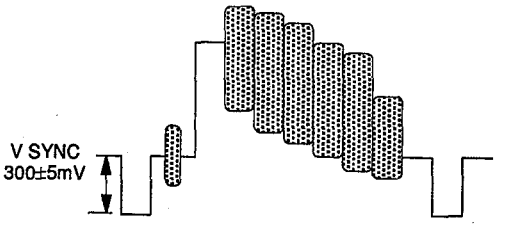


8-7-3. Sync Level Adjustment

Adjustment Purpose: To adjust the sync level.

Adjustment Error Symptom: The brightness of the screen varies due to changes in the sync length.

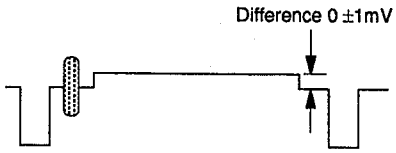
Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ■ EFFECT TRANSITION LEVER: A-BUS
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 31 (EV SYNCLEV)
Standard Setting	8C
Specified Value	V SYNC 300±5mV



8-7-4 Set Up Level Adjustment

Adjustment Purpose: To adjust the set up to 0.
Adjustment Error Symptom: Black seems to float on the screen.

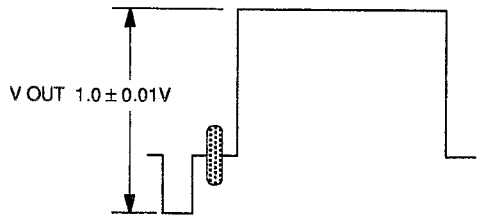
Signal	INPUT: No input
Panel Operation	MIX/EFFECT: NORMAL MIX EFFECT TRANSITION LEVER: A-BUS Press the BLACK FADE. (The indicator flashes.)
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 29 (EV SET UP)
Standard Setting	4C
Specified Value	Difference 0±1 mV



8-7-5. Read A Y Level Adjustment

Adjustment Purpose: To adjust the Y level read from the A-BUS memory.
Adjustment Error Symptom: The background white is not correctly displayed when white is selected as the background color of the A-BUS.

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ◨ EFFECT TRANSITION LEVER: A-BUS 100% white is selected as the background color of the A-BUS and B-BUS.
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 5 (EV A RY)
Standard Setting	B6
Specified Value	V OUT 1.0±0.01V

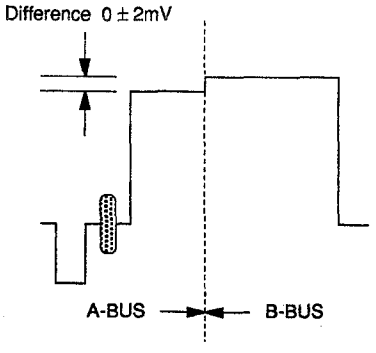


8-7-6. Read B Y Level Adjustment

Adjustment Purpose: To adjust the Y level read from the B-BUS memory.

Adjustment Error Symptom: The background white is not correctly displayed when white is selected as the background color of the B-BUS.

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	Switch the pattern generator output to the white raster. A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ☐■ EFFECT TRANSITION LEVER: Wipe the A-BUS and B-BUS in the middle of the screen. Background color: A-BUS and B-BUS are white.
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 6 (EV B RY)
Standard Setting	B6
Specified Value	Difference 0±2 mV

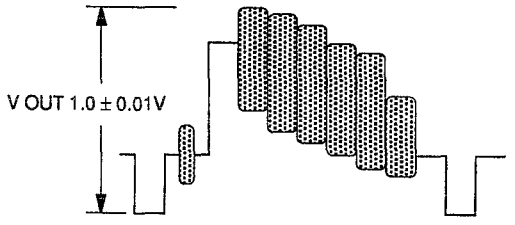


8-7-7. Write A Y Level Adjustment

Adjustment Purpose: To adjust the Y level written to the A-BUS memory.

Adjustment Error Symptom: Even if white is correctly displayed as the background color of the A-BUS, white is not correctly displayed when a picture is input.

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ☐■ EFFECT TRANSITION LEVER: A-BUS
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 3 (EV A WY)
Standard Setting	64
Specified Value	V OUT 1.0±0.01V

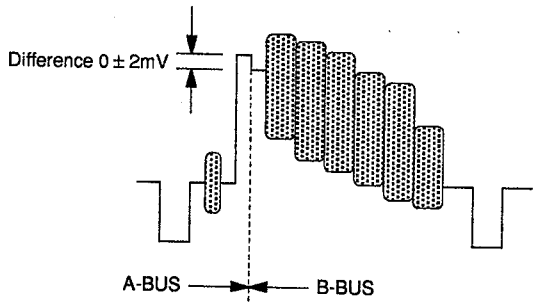


8-7-8. Write Y Level Balance Adjustment

Adjustment Purpose: To adjust the Y level written to the B-BUS memory.

Adjustment Error Symptom: Even if white is correctly displayed as the background color of the B-BUS, white is not correctly displayed when a picture is input.

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ◨ EFFECT TRANSITION LEVER: Wipe the A-BUS and B-BUS in the middle of the white bar.
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 4 (EV B WY)
Standard Setting	68
Specified Value	Difference 0±2 mV

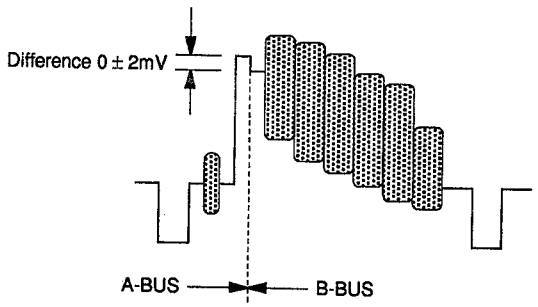


8-7-9. Y/C SEP A Y Level Adjustment

Adjustment Purpose: To adjust the Y level written to the A-BUS memory when a composite signal is input.

Adjustment Error Symptom: The Y level of the A-BUS is not correctly output when a composite signal is input.

Signal	INPUT: CB (PLAYER 2, VIDEO) INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 2 B-BUS: PLAYER 1 WIPE PATTERN: ◨ EFFECT TRANSITION LEVER: Wipe the A-BUS and B-BUS in the middle of the white bar.
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 1 (EV A Y/C Y)
Standard Setting	67
Specified Value	Difference 0±2 mV

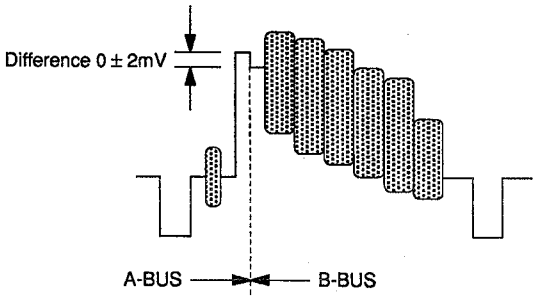


8-7-10. Y/C SEP B Y Level Balance Adjustment

Adjustment Purpose: To adjust the Y level written to the B-BUS memory when a composite signal is input.

Adjustment Error Symptom: The Y level of the B-BUS is not correctly output when a composite signal is input.

Signal	INPUT: CB (PLAYER 2, VIDEO)
Panel Operation	A-BUS: PLAYER 2 B-BUS: PLAYER 2 WIPE PATTERN: ◨ EFFECT TRANSITION LEVER: Wipe in the middle of the white bar.
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 2 (EV B Y/C Y)
Standard Setting	66
Specified Value	Difference 0±2 mV

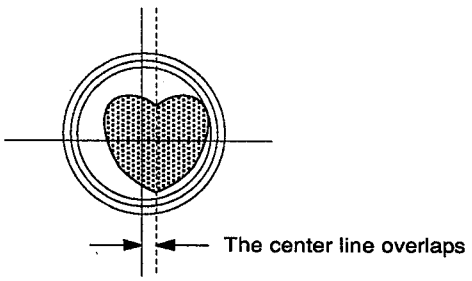


8-7-11. A HCENT Adjustment

Adjustment Purpose: To align the center of the A-BUS display with the center of the input picture.

Adjustment Error Symptom: The input picture is shifted from the center, or the right and left sides of the display turn black.

Signal	INPUT: CIRCLE (AUX 1) A-BUS: AUX B-BUS: AUX (BACKGROUND: BLACK)
Panel Operation	WIPE PATTERN: ❤ EFFECT TRANSITION LEVER: Display the heart-shaped pattern in the middle of the screen.
Measurement Point	Video picture of PGM1
Measuring Equipment	Monitor
Adjusting Elemen	EVR 9 (EV A HCENT)
Standard Setting	CC
Specified Value	The center line of the circle overlaps with the center line of the heart-shaped pattern.

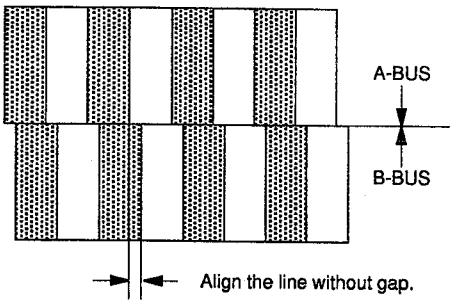


8-7-12. B HCENT Balance Adjustment

Adjustment Purpose: To align the center of the B-BUS screen with the center of the A-BUS screen.

Adjustment Error Symptom: When the A-BUS signal is the same as the B-BUS signal, the screen is moved right or left using the effect transition lever.

Signal	INPUT: CB (PLAYER 2, VIDEO)
Panel Operation	A-BUS: PLAYER 2 B-BUS: PLAYER 2 WIPE PATTERN: ▬ EFFECT TRANSITION LEVER: Wipe in the middle of the display.
Measurement Point	Video picture of PGM1
Measuring Equipment	Monitor
Adjusting Elemen	EVR 10 (EV B HCENT)
Standard Setting	CB
Specified Value	The vertical lines are aligned without gaps.

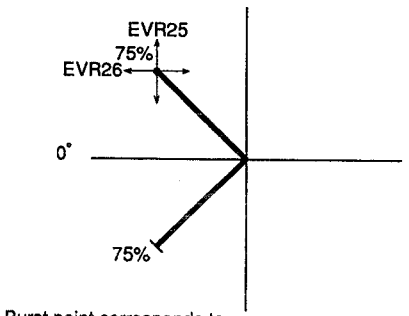


8-7-13. Burst Level Adjustment

Adjustment Purpose: To adjust the color burst level.

Adjustment Error Symptom: Color depth of the VCR picture etc. varies depending on whether the signal passes through the unit.

Signal	INPUT: CB (PLAYER 1, S VIDEO)	
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ◧ EFFECT TRANSITION LEVER: A-BUS	
Measurement Point	Video picture of PGM1	
Measuring Equipment	Vector scope	
Adjusting Elemen	EVR 25 (EV BST R)	EVR 26 (EV BST B)
Standard Setting	7E	73
Specified Value	75% Position	



Burst point corresponds to the 75% position.

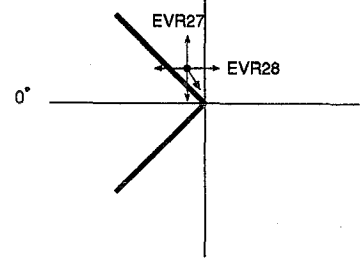
8-7-14. A White Balance Adjustment

Adjustment Purpose: To adjust the white balance of the A-BUS.

Adjustment Error Symptom: White parts are slightly colored.

Signal	INPUT: CB (PLAYER 1, S VIDEO)	
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ◨ EFFECT TRANSITION LEVER: A-BUS	
Measurement Point	Video picture of PGM1	
Measuring Equipment	Vector scope	
Adjusting Elemen	EVR 27 (EV PLSA R)	EVR 28 (EV PLSA B)
Standard Setting	7D	72
Specified Value	The luminous point comes to the center when the vector gain is maximized	

Bring the luminous point to the center using EVR27 and EVR28.



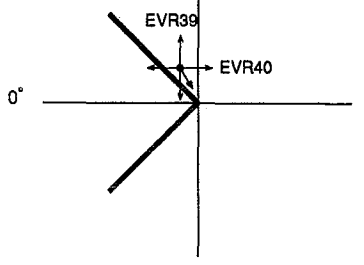
8-7-15. B White Balance Adjustment

Adjustment Purpose: To adjust the white balance of the B-BUS.

Adjustment Error Symptom: White parts are slightly colored.

Signal	INPUT: CB (PLAYER 1, S VIDEO)	
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ◨ EFFECT TRANSITION LEVER: B-BUS	
Measurement Point	Video picture of PGM1	
Measuring Equipment	Vector scope	
Adjusting Elemen	EVR 39 (EV PLSB R)	EVR 40 (EV PLSB R)
Standard Setting	7A	6C
Specified Value	The luminous point comes to the center when the vector gain is maximized.	

Bring the luminous point to the center using EVR39 and EVR40.



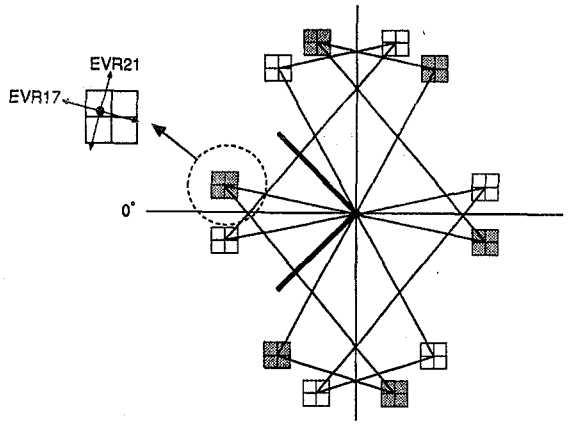
8-7-16. A Read Chroma Adjustment

Adjustment Purpose: To adjust the color levels and color phases of the A-BUS.

Adjustment Error Symptom: Some colors have different shades or phases.

Signal	INPUT: CB (PLAYER 1, S VIDEO)	
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ◨ EFFECT TRANSITION LEVER: A-BUS	
Measurement Point	Video picture of PGM1	
Measuring Equipment	Vector scope	
Adjusting Elemen	EVR 21 (EV A HUE)	EVR 17 (EV A RC)
Standard Setting	9D	90
Specified Value	The luminous point of each color comes to the center of the four squares.	

Bring the luminous point of each color into the center of the four squaresusing EVR21 and EVR17.
(Bring the luminous point into the standard luminous point frames of the vector scope.)

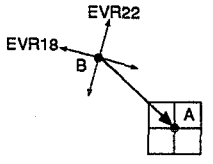


8-7-17. B Read Chroma Adjustment

Adjustment Purpose: To adjust the color levels and color phases of the B-BUS.

Adjustment Error Symptom: Some colors have different shades or phases.

Signal	NPUT: CB (PLAYER 1, S VIDEO)	
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ▬ EFFECT TRANSITION: At the center	
Measurement Point	Video picture of PGM1	
Measuring Equipment	Video picture of PGM1	
Adjusting Elemen	EVR 22 (EV B HUE)	EVR 18 (EV B RC)
Standard Setting	A2	8B
Specified Value	The B read chroma luminous point overlaps with the A read chroma luminous point of the previous subsection.	



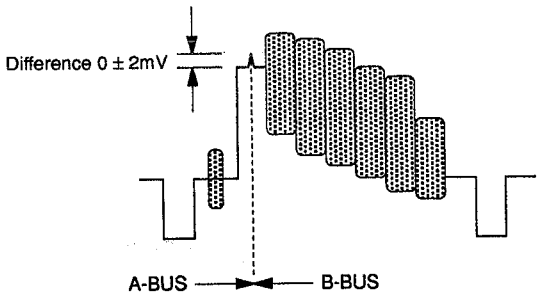
The B read chroma luminous point overlaps with the A read chroma luminous point.

8-7-18. Soft Border Level Adjustment

Adjustment Purpose: To adjust the levels of the A-BUS and B-BUS borders when the soft border is selected.

Adjustment Error Symptom: The brightnesses of the A-BUS and B-BUS borders are different.

Signal	INPUT: CB (PLAYER 1, S VIDEO)
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ◧ PATTERN EDGE: SOFT EFFECT TRANSITIONEFFECT TRANSITION LEVER: Wipe in the center of the white bar.
Measurement Point	Video picture of PGM1
Measuring Equipment	Oscilloscope
Adjusting Elemen	EVR 47 (EV SB ADJ)
Standard Setting	C6
Specified Value	Difference 0±2 mV (Reduce the difference as much as possible.)

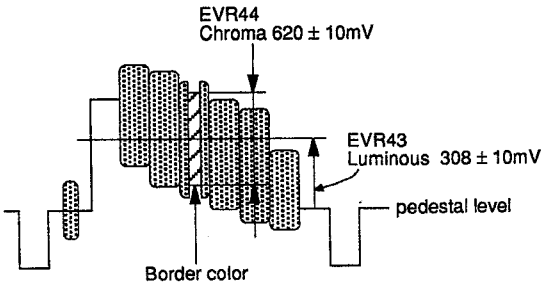


8-7-19. Border Color Y/C Level Adjustment

Adjustment Purpose: To adjust the YC level of the color border.

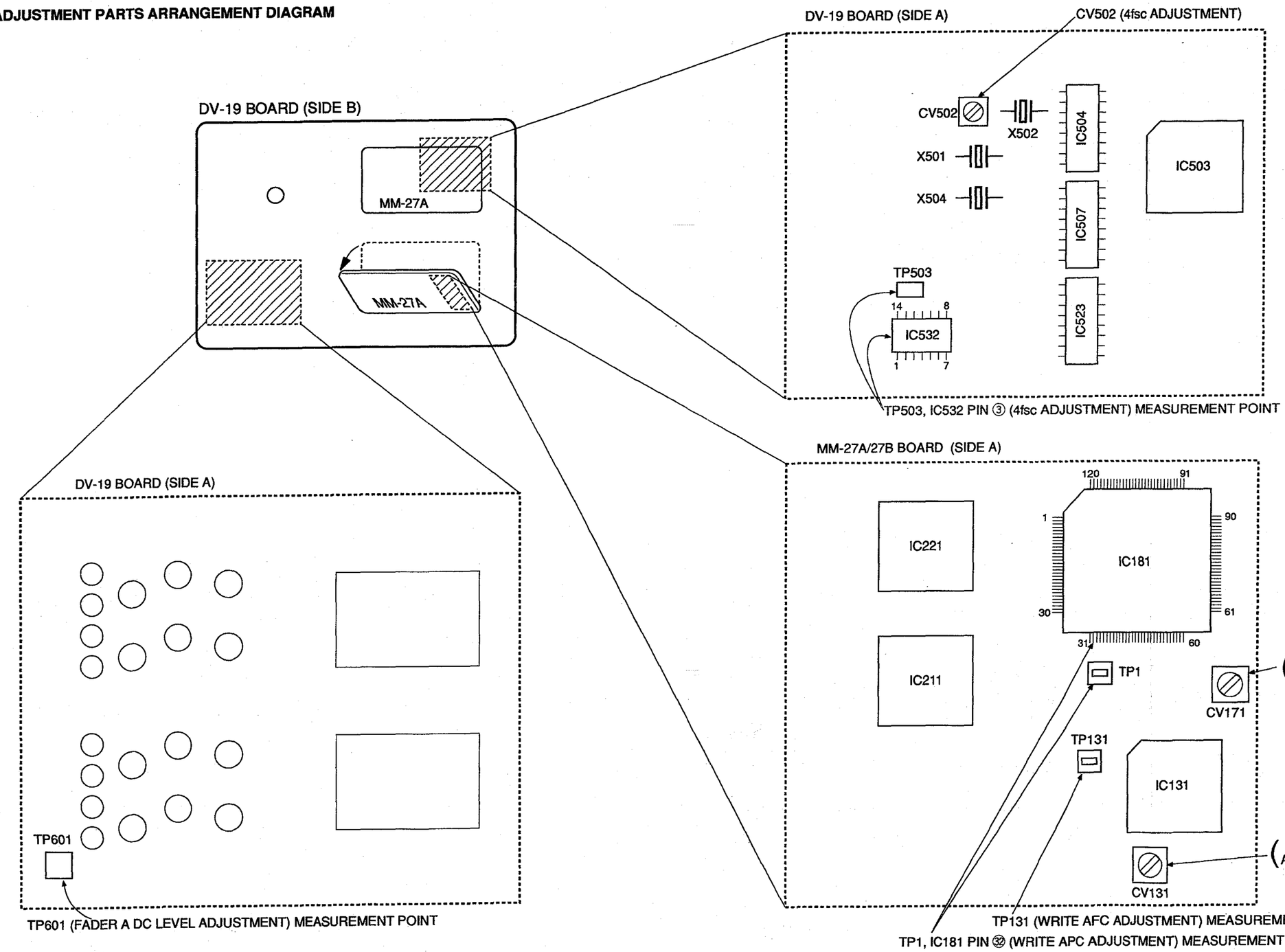
Adjustment Error Symptom: The YC level of the border of the color border wipe changes.

Signal	INPUT: CB (PLAYER 1, S VIDEO)	
Panel Operation	A-BUS: PLAYER 1 B-BUS: PLAYER 1 WIPE PATTERN: ◧ PATTERN EDGE: BORDER BORDER COLOR: LIGHT GREEN	
Measurement Point	Video picture of PGM1	
Measuring Equipment	Oscilloscope	
Adjusting Elemen	EVR 43 (EV BC Y)	EVR 44 (EV BC C ADJ)
Standard Setting	5A	D0
Specified Value	Luminous 308±10 mV	Chroma 620±10 mV



- The color bar signal and the border color signal are difficult to discremenate the border line between them. Move the WIPE position herizontally and confirm the border line.
- EVR43 (Luminance Adj.) sets the Y-level of the border color signal above the pedestal level.
- EVR44 (Chroma Adj.) sets the chroma level of the border color signal.

8-8. ADJUSTMENT PARTS ARRANGEMENT DIAGRAM



E-V13317 / Druck 47

FXE-100P

SONY

SERVICE MANUAL

AEP Model
UK Model
E Model

CORRECTION-1

Please correct your service manual.

page	INCORRECT				CORRECT			
	Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
6-2	52	3-957-769-01	SET, KEY TOP		* 52	1-467-473-11	KY-22 BOARD	
	* 54	1-649-632-11	KY-22 BOARD		54	This part is not supplied.		
	98	1-467-473-11	KEYBOARD BLOCK		98	3-957-769-02	SET, KEY TOP	
7-35	*	1-649-632-11	KY-22 BOARD		*	1-467-473-11	KY-22 BOARD	

Sony Corporation
Consumer A&V Products Company
Personal A&V Products Div.

9-973-583-91

Published by Personal A&V Products Div.
Quality Engineering Dept.